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**PERCEIVED CREDIBILITY OF NEWS ON WORLD WIDE WEB HOMEPAGES**

by

Linda N. Pepin

A thesis submitted to the Faculty of the University of Delaware in partial fulfillment of  
the requirements for the degree of Master of Arts in Communication

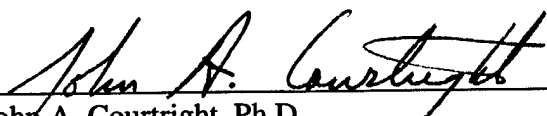
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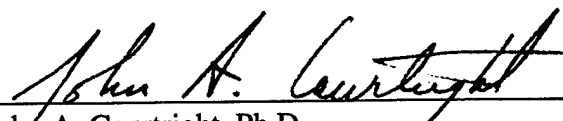
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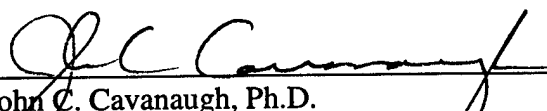
# PERCEIVED CREDIBILITY OF NEWS ON WORLD WIDE WEB HOMEPAGES

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## ABSTRACT

This study was designed to compare the credibility of news posted on news media-sponsored World Wide Web homepages, organization-sponsored homepages, or shown on television. There is evident concern among journalists over the public's perception of news credibility, and it seems there is an intuitive link between high channel credibility and increased use of that channel or medium. However, this study provides evidence that media credibility is only of secondary importance to news users as they decide where to get their news. While people do make credibility judgments about the news channels they use, they do not necessarily choose to use or not use a channel based on its perceived credibility.

A 2 x 2 x 3 (Topic x Expectation Confirmation x Source) between-groups design was used. The participants, 315 undergraduate college students, initially filled out a survey to gauge their expectations of the organizations and the channels used in the study. Approximately a week later, participants returned and were exposed to one treatment condition, consisting of watching a news story on television or reading a news story on a World Wide Web homepage. Immediately following the treatment, participants completed another survey to measure their response to the news story and to gather information about their news use habits.

Participants in this study found the WWW to be a credible channel in general for national news—even more credible than national television news. This was true for participants who reported using the Web for news, as well as for those who do not get any news on the Web. However, when credibility ratings for specific stories were analyzed, there was no clear indication that either channel (WWW or TV) was more credible than the other. Interestingly, people who use the WWW for news actually gave Web news a lower credibility rating overall than the non-users did. The college students that constitute the participant pool for this study are more likely than a cross-section of the population to have experience with the WWW, and may therefore be less skeptical of the WWW than other sample populations.

The study also found that credibility of a particular organization does not necessarily translate into equivalent or proportional credibility for news on its own Web site. Organizations with higher credibility than others do not necessarily enjoy higher credibility ratings for news on their homepages. It is likely that people find specific media sources to be more credible than “national news media” as a whole. Finally, people are more likely to judge the credibility of news stories on the Web based on characteristics of the story itself rather than by looking for credibility cues from the Web site or site sponsor.

## Chapter 1

### INTRODUCTION

When it comes to obtaining news, people are turning to the Internet at an ever-increasing rate. Recent polls show that 36 percent of Americans go to the Internet for news—up from 14 percent only three years ago (Pew, 1998). In the same period, the number of Americans who say they rely solely on evening television news broadcasts for their news has decreased by half, dropping from 30 to 15 percent (Pew, 1998). Coupled with the claim that the number of World Wide Web (WWW) users doubles every 100 days (Harmon, 1998), it is increasingly important to study news on the Internet.

In particular, the credibility of news on the WWW is worthy of examination. The Pew (1998) survey indicated that people rate accuracy as the most important aspect of news, and because accuracy is a key component of credibility, it is logical that people who use the WWW as a news source must believe news on the WWW is credible. But do they think it is as credible as television news, which has commonly been found to be the most credible of the news media (e.g., Gaziano & McGrath, 1986; Newport & Saad, 1998; Roper, 1985)? This is the question this study seeks to explore, specifically by comparing perceived credibility of news on the WWW with perceived credibility of news on television. Television is used as the point of comparison because of its reputation as the most credible news source when compared to print and radio (Gaziano & McGrath,

1986; Lee, 1976; Roper, 1985; Trevisani, 1992). Gaziano and McGrath (1986, p. 456) found that people are "most inclined to believe television as to believe newspapers by a 2-to-1 margin (52% versus 25%)." There have been several studies comparing perceived credibility of newspapers and television but, to date, there are no known published scholarly studies comparing the credibility of the WWW to other media. A 1998 study by independent corporation Jupiter Communications found that "80 percent of Web surfers trust on-line news as much as they do news provided by more traditional media like newspapers and television" (Richtel, 1998, p. E3). The same study found that slightly more than seven percent of on-line news users view Web news as more reliable than the more traditional media (Richtel, 1998). However, Jupiter Communications declined a request for gratis information on the study's methods and subject pool, so its methods and results cannot be properly evaluated. Additionally, as Richtel (1998) points out, the motives behind the survey were financial not scholastic; Jupiter Communications' press release about the findings of high credibility of Web news was designed to gain interest in Jupiter's revenue-making Digital News forum.

This study looks for a measurable difference in the credibility people perceive in television news and the credibility they perceive in news on the WWW. Similar to the gist of Roper's (1985) study comparing media credibility of television, newspapers, and radio, this study will explore the perceived credibility of news reports on television, TV-sponsored WWW homepages, and homepages sponsored by an organization that is part of the news story.

### Why Study World Wide Web Credibility?

The relative credibility of news on television and the World Wide Web is an important area for study, theoretically and practically.

### Theoretical Implications

In terms of theory, media credibility concepts are largely based on a lengthy stream of research on source credibility. Scholars' fascination with source credibility began with Aristotle and continues in the present. Much of the literature on source credibility is tied to persuasion; while news reporting is not an overtly persuasive effort, with the wide range of news sources available, news consumers are somehow persuaded to use particular news media outlets. This study seeks to quantify the role media credibility plays in this selection process. As Hovland, Janis, and Kelley (1953, p. 35) observed, "The very same presentation tends to be judged more favorably when made by a communicator of high credibility than by one of low credibility."

This study is informed by source credibility studies, Petty and Cacioppo's (1986) elaboration likelihood model (ELM), attribution theory, and the theory of cognitive dissonance. Source credibility studies illuminate underlying constructs and scale items for the study, while the ELM highlights the importance of the role credibility plays in communication situations. Attribution theory and cognitive dissonance theory both describe the cognitive processes people go through when they evaluate messages. This cognitive evaluation includes an evaluation of source credibility attributes. Thus, all four areas of research are foundational to this study.

### Practical Implications

From a practical standpoint, news media professionals and public relations practitioners in particular should be interested in how and why people consume information (particularly news) on the World Wide Web. Studies have shown that Web users “have the ability to and do critically assess Web sources, according to their perceived credibility” (Ognianova, 1998, p. 156).

Journalists and public relations professionals have begun to recognize the impact the WWW is having on news consumers. Rich (1998) observed in a *New York Times* editorial: “The Internet, speed and all, is shaking up the coverage and dissemination of news as has nothing else in the half-century since the proliferation of television. It may one day even eclipse TV, much as TV long ago downsized radio” (p. A29). Just as media organizations have boosted their presence on the Web, public relations practitioners and marketing departments are also emphasizing the importance of a presence on the World Wide Web—everything from display ads to soup cans now include Uniform Resource Locators (URLs) as a standard feature.

Organizations’ communication professionals should be interested in finding out if people visit organizational Web sites, what they are looking for at the site, and how users are judging the information at the site. This last question is the focus of this study, which will use the U. S. Air Force as the organization in question, because the author has personal experience as a communicator for the Air Force.

Like other organizations, the Air Force has a limited number of communication professionals, and as the Air Force budget and staffing continue to decline, there are

fewer people to do the work. As such, it is imperative that each communication effort gets the biggest "bang for the buck." Thus, it is necessary to find out how important it is to disseminate news through various media. If, for example, research shows that people find organizational homepages to be non-credible when it comes to news about the organization, the public affairs practitioners may wish to re-direct effort in another direction. On the other hand, if organizational news on the WWW is seen as credible, public relations professionals can use the WWW to provide news directly to the public. Credibility is an important area of study in this context, because source credibility has the effect of amplifying individuals' impressions of the message (Reardon, 1991).

Journalists historically have been concerned with the credibility of their medium. Particularly in the past year, serious reporting errors on the part of several major newspapers and television news networks have sharpened the focus on credibility. For example, several serious breaches of media credibility occurred in the space of a few months in 1998.

CNN and Time admitted their story about the U.S. military's possible use of nerve gas on American soldiers during the Vietnam War was inaccurate; Boston Globe columnist Patricia Smith was forced to quit her job after admitting she made up quotes in several columns; and the Cincinnati Enquirer apologized to Chiquita Banana for a story based on information it says its reporter stole from the company's voice mail ("Poll Says," 1998, p. A18).

A poll conducted by Princeton Survey Research Associates in July, 1998, "found that 53 percent of Americans characterized news reporting as 'often inaccurate'" ("Poll Says," 1998, p. A18). Errors in reporting not only damage media outlets' public relations, but may have an impact on their bottom line. "While the image of a newspaper

is often not a direct predictor of readership and time spent reading, it is a predictor of satisfaction with the newspaper, which in turn is related to reading habits” (Burgoon, Burgoon, & Wilkinson, 1981, p. 433). Burgoon and his colleagues (1981) focused on newspapers in their study, but the same principles may be applied to television and the World Wide Web.

While this study does not expect to find definitive answers to all the questions posed above, it does serve as an important starting point in research of the credibility of news on the World Wide Web.

### Literature Review

For simplicity’s sake, communication can be thought of in terms of a linear source-message-channel-receiver model. This study focuses on and manipulates the first three (source, message, and channel) to observe the effects of the manipulations on perceived credibility. It is recognized that particularly with the new, more interactive media, a simple linear model does not accurately describe the communication process. Furthermore, it is an oversimplification to consider each of these components separately, because numerous studies have uncovered relationships between two or more of these components. However, for clarity, the following discussion is largely divided along source, message, channel, and receiver lines.



## Source

For the purposes of this study, the source is operationalized as the organization broadcasting or posting the news story. The source will be varied two ways: a national broadcast news media organization and Air Force.

Source Credibility. At the outset, it is important to explicitly state that source credibility is a misnomer. Specifically, the concept of interest for this study is *perceived* source credibility. More than just semantics, the latter term describes not purely an attribute or set of attributes possessed by the source, but rather a relationship term between the source and the receiver. Sources are only credible to the extent that receivers perceive them to be so. Conceivably, a given receiver may see an expert who is telling the truth as non-credible. The receiver's evaluation of the source as non-credible is not so much a reflection of the source, but a reflection of the relationship between the receiver and the source. This relationship is a complex one, influenced not only by source and receiver characteristics, but also by the message and the message channel as well. With this in mind, for simplicity's sake, the following discussion will use the terms "source credibility" and "perceived source credibility" interchangeably.

Aristotle is recognized as the first scholar to address the issue of source credibility, and modern scientific studies have reinforced his writings on ethos, or source credibility. McCroskey and Young (1981) note that Aristotle saw ethos (which he described as consisting of good sense, character, and good will) as "the most potent means of persuasion" (p. 24). Building on Aristotle's ideas, a plethora of modern factor analytical studies of source credibility (e.g., Applbaum & Anatol, 1972; Lee, 1976;

Tuppen, 1974) have uncovered slightly different dimensions of source credibility for different communicators in different situations, and researchers are not consistent in naming these dimensions. For instance, what one researcher calls "trustworthiness" (e.g., Austin & Dong, 1994), another may call "safety" (e.g., Berlo, Lemert, & Mertz, 1970), depending on the particular semantic differential scales that cluster together in any given factor analysis.

Rather than trying to uncover new shades or dimensions of source credibility, however, McCroskey and Young (1981) make a case for keeping the measurement of source credibility in line with the earliest definitions of the construct. "When we begin adding other scales, scales which bear no resemblance to the originally defined construct, it doesn't somehow change the construct. At best it suggests the credibility construct is but a subset of all that which is perceivable" (p. 30). Trevisani (1992) notes, "Future studies may benefit from considering credibility as composed of the dimensions trustworthiness and expertise only, and include it in a larger construct (source image) that also will include dynamism, sociability, and others" (p. 44).

Although there are almost as many different lists of the components of source credibility as there are scientific studies on the topic, the concepts of expertise and trustworthiness are regularly cited as foundational dimensions of credibility. Essentially, these two components describe a source's ability to know the truth and inclination to tell the truth, respectively (Hovland, Janis, & Kelley, 1953; O'Keefe, 1990). The expertise and trustworthiness dimensions of the source credibility construct are directly related to the good sense and good will components of Aristotle's ethos. While some studies have

couched credibility studies in terms of the ability of a source to influence opinions, it is more common to define source credibility purely in terms of receivers' impressions of the source's trustworthiness and expertise (O'Keefe, 1990). This study will follow this more common practice.

The literature on source credibility, particularly when related to persuasion, frequently mentions liking for the source in tandem with source credibility, although credibility is more important than liking for the source in persuasion (O'Keefe, 1990). People who like the communicator may see the source as more trustworthy, although not necessarily more competent (O'Keefe, 1990); therefore, liking for the source can have an impact on perceived source credibility. Hovland, Janis, and Kelley (1953) found that people who see the source as somewhat similar to themselves may find the source more credible, although O'Keefe (1990) argues that this is the case only to the extent that similarity induces increased liking for the source, which would then make the receiver more likely to find the source trustworthy.

The interest in source credibility derives primarily from a desire to understand why and how some messages are accepted while others are not. When the same message is presented, Hovland, Janis, and Kelley (1953) offer two explanations for the "lesser effectiveness of unfavorable (e.g., low credibility) communicators in bringing about opinion change" (p. 37): (a) receivers who have an unfavorable impression of the source fail to pay close attention the content of the message, (an option that is refuted by their own research) and (b) receivers are not motivated to accept messages from sources they view unfavorably. This second explanation is particularly apropos when related to

receivers' motivation in selecting a news media outlet. People who have a choice between news sources are more likely to turn to those they view favorably.

Trenholm (1989) more explicitly describes the conditions under which source credibility has the greatest bearing: "Establishing credibility is important when the relationship between agent and target is not particularly personal, when the recommendation being made is complex, when what is at stake is a belief rather than a value, and when the persuader does, in fact, possess expert qualifications" (p. 195). Other than the complex recommendation item, all of the above factors are present in the relationship between an individual and a news media source.

Hass (1981) explains that an expert source is best for changing beliefs, while a trustworthy source is more likely to change values: "When a source is interested in changing a belief, the recipient's interest is in being confident that the advocated attitude is a verifiable correct assertion. As a result, a credible source will be one who has had experience on the topic—an expert" (p. 153). In contrast, when it comes to influencing values, a trustworthy peer is likely to be more persuasive than an expert (Hass, 1981). This is demonstrated in a study by Lui and Standing (1989), in which a group of nuns found a priest (high on trustworthiness) more credible than a doctor (high on expertise) in providing information on AIDS.

Source/Message Interaction. Hovland, Janis, and Kelley (1953) emphasize the importance of source credibility: "The motives of the audience to accept recommendations are higher the more credible the persona making them (p. 39). According to Cook (1969), high credibility sources prompt less counterargument on the

part of the receiver. This low level of cognitive response to a high credibility source makes the receiver less likely to remember the particular message, but instills more attitude change. However, it can also mean that there are times when low credibility communicators are more persuasive. "With a counterattitudinal message, the high-credibility communicator will tend to have a persuasive advantage over the low-credibility source; with a proattitudinal message, however, the low-credibility communicator appears to enjoy greater persuasive success than the high-credibility source" (O'Keefe, 1990, p. 143). This is because a proattitudinal message from a high credibility source requires less cognitive processing than the same message from a low credibility source. O'Keefe (1990) goes on to caution, however, that this should only be generalized to cases of low receiver involvement when the source is identified before the message is delivered (which includes the conditions of this particular study).

The discrepancy of a message is defined as the extent to which the message differs from the recipient's preexisting attitude, value, or opinion. According to social judgment theory (Sherif, Sherif, & Nebergall, 1965), the discrepancy of a message affects acceptance or rejection of the message; the more discrepant the message, the more likely the receiver will reject it. Furthermore, cognitive dissonance theory (O'Keefe, 1990) suggests that a receiver who rejects the message is likely to evaluate source credibility negatively. Looking at these theories in tandem thus indicates that the receiver of a discrepant message will perceive the source to be less credible than a source that sends nondiscrepant messages.

While this study will not measure discrepancy per se, it is important to note that, “high-credibility sources can safely advocate somewhat more discrepant positions than can low-credibility sources” (O’Keefe, 1990, p. 165). Therefore, although low-credibility communicators may sometimes be more effective in persuading a receiver, it is desirable to be a highly credible source if your message is expected to be somewhat discrepant from the receivers’ views.

Furthermore, Osgood and Tannenbaum’s (1955) congruity principle states that “changes in evaluation are always in the direction of increased congruity with the existing frame of reference” (p. 43). According to congruity theory, it is unlikely that highly credible sources would be able to deliver an unbelievable message without either damaging their own credibility or the believability of their message. As a note of caution, however, it may be simplistic to assume—without considering content or context—that a more credible source is necessarily more persuasive or more believable. Based on their research, Austin and Dong (1994) conclude, “a highly reputable source can produce an unbelievable story” (p. 979). Therefore, while congruity theory indicates that a high credibility source will be seen as very likely to produce a credible message, there are exceptions to the rule.

For the most part, the more credibility a receiver ascribes to a source, the more credibility the same receiver will ascribe to a message from that source, leading to the following hypothesis:

**H1:** The perceived credibility of a news media organization and the perceived credibility of the Air Force as an organization is directly related to the perceived credibility of messages on their respective WWW homepages.

This link between an organization's credibility and the credibility of information on its Web pages has seen some support in a previous study. Ognianova (1998) found that, with respect to online advertising, "perceptions of the online content provider will significantly influence the perceived credibility of ads placed in its service, so that ads will be perceived as most credible when seen in an online news service perceived as most credible and associated with journalism" (p. 155).

Greenberg and Miller (1966) found that participants gave a fairly credible rating to a source that was introduced as having low-credibility. They attribute this to the high quality of the message in the experiment: "The quality of the message was apparently sufficient to induce subjects to create a somewhat favorable perception of the source. It would appear that these subjects reasoned that such a good message could only have come from a good source" (Greenberg & Miller, 1966, p. 130).

This points out an important difference between perceived credibility independent of a message from the source, and credibility that is derived from some aspect of the message. Other message qualities that can influence derived credibility include speed of speaking, attractiveness of the source, cues about communicator confidence, humor, and nonfluencies (e.g., stuttering or using fillers like "um," and "ah") (Eagly & Himmelfarb, 1978; O'Keefe, 1990). To help control for these factors, this study will use the same people and the same file footage for each television segment, and the wording of the messages will remain constant across sources (i.e., the message on the media-sponsored Web page will be worded the same as the message from the Air Force Web page).

Another source-message interaction is uncovered by research into the effect of revealing the source of a message before or after the message is given. Scholars have found that if a source is revealed after a message is given, credibility has a smaller impact on message acceptance than if the source is revealed beforehand (O'Keefe, 1990). Because this study seeks to maximize the credibility effect in order to be able to measure it, the source will be revealed prior to exposing participants to the message.

### Channel

In this study, the channel is operationalized as the medium through which the news story is disseminated. The channels will be television and the World Wide Web.

Media credibility has not been widely explored, and to the extent that it has been studied, researchers have rarely agreed on an approach. Much of the work on media credibility focuses on the differences between different types of media and looks for different levels of credibility for different media channels (Gaziano & McGrath, 1986). Essentially, these studies treat the different media channels as different sources, and evaluate relative perceived credibility of the various channels.

The approach that seeks credibility differences based on channel differences has its critics. Neuman (1991), for example, cites educational research, rather than persuasion research used by most communication scholars, to make the claim, "There is no evidence of consistent or significant differences in the abilities of different media to persuade, inform, or even to instill an emotional response in audience members (p. 99). This assertion is questionable, however, in light of studies that have found different



degrees of effect for different media. For instance, Chaiken and Eagly (1976) found that for messages that are difficult to understand, written materials were more comprehensible and persuasive than audiotaped or videotaped messages. For easy-to-understand messages, however, videotaped messages were most persuasive, followed by audiotaped messages and then print.

Other critics also claim that credibility is not as much a function of the media channel as it is a function of the situation, the public's previous opinion on a subject (Gunther, 1992; Robinson & Kohut, 1988), and of message content (Austin & Dong, 1994). Gunther's (1992) study showed that "group membership predicted credibility judgments more systematically than any of the other variables measured" (p. 156). Austin and Dong's (1994) results indicate that the apparent reality of message content, rather than the reputation of a media source, influenced participants' judgment of news believability. Gunther (1992) advocates treating credibility as a relation term that takes into account the relationship between the receiver, the message, and the receiver, rather than as a property of individuals, or, by extension, a property of a particular medium. Therefore, researchers are cautioned that when attributing different levels of credibility to individual channels, it is important not to overlook other variables.

Robinson and Kohut (1988) claim that "the public does not draw any clear distinction between print and television news, at least not in terms of believability" (p. 175). Instead, they suggest a grouping of "routine" sources the individual usually uses (and finds credible) and "special" sources on which the individual does not usually rely for news and, thus, perceives as less credible. Based on this reasoning and the theory of

selective exposure, which suggests that if people get their views from the WWW, they are also more likely to have their views reinforced there, the following hypothesis is put forth:

**H2:** People who regularly obtain at least some of their news from the World Wide Web will perceive the WWW to be a more credible news source than people who do not routinely use the WWW as a newsgathering tool.

Cognitive dissonance theory also leads to the above hypothesis, because it would be cognitively dissonant for people to regularly use a news source they did not find credible. Johnson and Kaye (1998) confirmed that, for politically-interested news consumers, heavy reliance on (as opposed to merely heavy *use of*) a particular online source has a significant positive relation to the user's credibility assessment of that source. Johnson and Kaye (1998) measure credibility as consisting of believability, fairness, accuracy, and in-depth coverage.

This study rests on the premise that when people are obtaining their news, they do not clearly distinguish between the channel and the source (such as the particular news organization, anchor or journalist). Thus, people group a genre of media together in their credibility assessments, and these groupings fall largely along channel lines (e.g., hometown newspapers, national newspapers, national television). Therefore, while the same news organization may put the same news on television and on their WWW site, this study hypothesizes that respondents will evaluate stories differently depending on the channel (medium) through which the story is received.

This study will use college students at an American university as respondents—a population that has grown up with television and, therefore, is very familiar with the

medium. This population is also expected to be somewhat familiar with the WWW, because universities use the WWW for posting student information, reserving materials for assignments, and more. Based on Kelly's experience corollary, which states "A person's construction system varies as he or she successively construes the replication of events" (Reardon, 1991, p. 16), people should be expected to have well-defined constructs for source credibility of TV news (with which they have extensive experience), but less-defined constructs for news on the WWW (with which they have less experience).

Additionally, people may also base judgments on what they know about the production process behind the medium and of credibility problems in the past. Specifically, television news has a long history of being produced and broadcast by professional journalists, while it is possible for anyone with basic computer skills and cheap software to produce a homepage on the WWW. Therefore, respondents will be more likely to believe TV than the WWW.

**H3:** People (Web users, as well as non-users) will perceive television as a more credible news source than the World Wide Web.

Johnson and Kaye (1998) studied Internet credibility among Internet users, and found that online media were judged more credible than newspapers or news magazines by that population. They note that, historically, "studies probing credibility report mixed results; some claim that online sources are more credible than their traditionally-delivered counterparts, while others have concluded the opposite" (p. 331). By directly comparing online with traditional sources, Johnson and Kaye (1998) report that while credibility

ratings for both types of sources are not very high, “online newspapers and online candidate literature are judged as significantly more credible than their traditional counterparts” (p. 331). Again, it is important to emphasize that their sample consisted purely of online users.

In contrast, a 1998 Gallup Poll shows that for a random sample of the U.S. population, five percent of respondents with an opinion said they “cannot trust” news on the Internet (Newport & Saad, 1998). Not all Web sites are uniformly credible or non-credible: Ognianova (1998) found that an online source identified with journalism is perceived as more credible than an unknown or non-journalistic source.

This hypothesis of channel effects is supported by Trevisani’s (1992) study. He found that respondents rated messages attributed to a TV channel as more interesting, knowledgeable, pleasant, and persuasive than the same message attributed to a national newspaper. “In general, the finding that an indirect effect of the communication channel occurred supports the hypothesis that also at the indirect level channels are not simple ‘pipelines’ for messages but rather can contribute to the process of image formation” (Trevisani, 1992, p. 41). To the extent that credibility is a part of an entity’s image, then channels should be expected to have some bearing on perceived credibility.

Trenholm (1989) notes that attribution theory states that consensus information—information about how others respond—makes people more likely to attribute behavior to situational factors than to dispositional factors. Thus, people who find the WWW to be a credible news source may still be looking for situational cues to tell them that the WWW really *is* a credible news source. TV news currently enjoys a great deal of consensus

information. While the WWW is a relatively new medium for news dissemination, there is already a general consensus that TV can be a fairly credible news medium (Gaziano & McGrath, 1986). With wider use of the Web and more discussion in the media about its credibility as a news dissemination tool, the WWW should eventually come to enjoy the benefit of the same type of consensus information that other media do. This consensus information is probably more scarce in people unfamiliar with the WWW in general than it is in people who regularly use the WWW.

Channel effects should also be expected purely based on the way information is presented in different media. Television offers the advantage of being able to show events taking place. "The most frequent reason people gave for selecting television was that 'seeing is believing'" (Gaziano & McGrath, 1986, p. 456). People also said they believed television because "it delivers news fast, easy and first" (Gaziano & McGrath, 1986, p. 456). Newspapers are credible because they provide detail (Gaziano & McGrath, 1986). The WWW combines the attractive features of both newspapers and television; it offers the thoroughness of newspapers and some of the immediacy and video capability of television. News on the WWW is predominantly text-based and has not yet advanced to the stage where newsreel clips are instantly available and convenient. This is quickly changing, however, and the line between the WWW and television is quickly blurring with the new Web-TV services.

The audiovisual channel differences that exist between WWW and TV formats most likely have an impact on credibility. With respect to persuasion, O'Keefe (1990, p. 185) observes, "There is heightened salience and impact of source characteristics as one

moves from written to audiotaped to videotaped messages. For example, credibility variations and likability variations make more of a difference in videotaped messages than they do in written messages.” He goes on to suggest that when it comes to relatively complex issues, channel differences between print and audio-visual messages may also have to do with the ability to go back and re-read. Neuman (1991) argues, “The distinctions between print and broadcast media will diminish as the individual is allowed greater control over the pace and format of the presentation, and accordingly the social definition and reality of its thought-provoking and involvement potential” (p. 109). This suggests that eventually, when WWW-based news outlets become sophisticated enough to allow for instantaneous retrieval (with no wait for a download) of audiovisual news clips, these outlets will offer the advantage of making it easy for users to re-view portions of a newscast, making the WWW a more powerful persuasive tool than TV.

In a final note on channel effects, McGuire (1985) claims that video is more effective for highly-credible speakers, while print is more effective for low-credibility speakers in persuading others, suggesting a source-channel interaction. The Web combines attributes of both print and visual media, leaving open the possibility that it may be a highly effective way for both high-credibility and low-credibility sources to communicate. In this possibility lies much opportunity for research.

Apparently, then, variance in message credibility across channels may be attributed partly to the differences in the channels themselves (Gaziano & McGrath, 1986; Trevisani, 1992), partly to the situation and receivers’ individual differences

(Gunther, 1992; Robinson & Kohut, 1988), and partly to message content (Austin & Dong, 1994).

### Message

There are many dimensions along which a message can vary. This study will include messages that vary by topic and in terms of expectation disconfirmation. Expectation disconfirmation is defined according to whether a story on the Air Force homepage appears to be in the best interest of the Air Force (expected condition) or if the Air Force puts out a news story apparently opposed to its best interests (expectation disconfirmation), such as bad news about an Air Force program. Other important dimensions along which messages vary include the story's journalistic style and respondent's involvement with the topic. These dimensions will be held constant to the extent possible in this study.

Topic Variation. In media credibility studies, the source or the channel is typically the focal point, but "it is unclear the extent to which judgments of news believability are based on source reputation, as opposed to the factors such as message content and context" (Austin & Dong, 1994, p. 974). In this instance, "source" is defined as the particular news outlet that published a story. This study will use two separate message topics, in order to investigate whether variance in perceived credibility of news is different for different topics. Both topics (childcare and food handling safety) are presumed to be fairly low-involvement topics for the sample of college undergraduate students. This presumption is tested as part of the study.

Expectation Disconfirmation. Besides topic, another message variable is message confirmation or disconfirmation of the receiver's expectations. It is reasonable to assume that an organization will be most likely to put out news that is in its best interests. In the case of media organizations, news they put out is not necessarily supposed to reflect positively or negatively on any given institution, but rather is supposed to be balanced and unbiased, so no hypotheses are put forth regarding media disconfirming expectations.

Reardon (1991) describes the cognitive schema perspective, which says that people use existing cognitive schema to try to accommodate new information. "Schema-inconsistent information may receive added attention at input, if task conditions allow it. Given adequate time, people elaborate and explain inconsistencies, thereby strengthening them in memory" (Reardon, 1991, p. 198). Thus, messages that disconfirm expectations may get more attention, meaning the message and the source are evaluated more closely. This closer evaluation may have implications for the receiver's evaluation of the source's credibility.

A communicator is likely to be perceived as more competent and more trustworthy if the position advocated disconfirms the audiences' expectations about the communicator's views (where such expectations derive from knowledge of the source's characteristics or circumstances), though certain sorts of trustworthiness judgments (concerning objectivity, open-mindedness, and unbiasedness) appear to be affected more than others (such as sincerity and honesty). . . . Ordinarily, of course, one expects persons to take positions that forward their own interests; sources who support views opposed to their interests thus disconfirm our expectations. And if we wonder why it is that a source is taking this (apparently unusual) position, we may well be led to conclude that the communicator must be especially competent and trustworthy: The source must really know the truth and must really be willing to tell the truth, otherwise why would the source be advocating that position? (O'Keefe, 1990, pp. 136-137)



It is important, however, that the source not be perceived as having ulterior motives. "When a person is perceived as having a definite intention to persuade others, the likelihood is increased that he will be perceived as having something to gain and, hence, as less worthy of trust" (Hovland, Janis, & Kelley, 1953, p. 23). Thus, in an instance in which an organization is presenting information that is apparently in its own self-interest, receivers may see the message as an attempt to persuade them to accept the organization's position, and therefore would find the organization less trustworthy and, hence, less credible.

One qualifier on this line of thought is that if the source is perceived as reluctantly giving the unfavorable information, the message may have less impact (O'Keefe, 1990). As explained by attribution theory, a receiver attributes a communicator's position to the communicator's situation or disposition. "A message taking an expected position is ordinarily explained in terms of these causal factors and is less persuasive than one that is unexpected and therefore more likely to be accounted for in terms of accurate or unbiased reporting" (Eagly & Himmelfarb, 1978, p. 521). If, however, the receiver attributes the communicator's unexpected message to an ulterior motive (i.e., to a flaw in the communicator's disposition), the message is less persuasive.

As a result, if an organization presents information in apparent conflict with its own self-interest, receivers would not see the message as an attempt to persuade them, and would therefore see the organization as more trustworthy. Public relations communicators attempt to take advantage of this.

Persons in some occupations and offices . . . are known to be under special pressures to communicate certain things and not others. For other roles, for example that of the newspaper reporter, the pressures may be perceived to operate in the direction of giving all the facts as accurately as he can ascertain them. That publicity men assume greater credibility will be accorded news stories as compare with advertisements is manifested by their repeated attempts to obtain publicity for their clients in the news columns (Hovland, Janis, & Kelley, 1953, p. 23).

Low credibility sources can increase their credibility if they communicate a message that is apparently in conflict with their own best interests (Hass, 1981; Sternthal, Phillips, & Dholakia, 1978). Numerous researchers have found that a communicator whose message disconfirms receivers' expectancies based on the communicator's background is more credible or more persuasive than a communicator whose message confirms receivers' expectancies (Eagly & Himmelfarb, 1978; O'Keefe, 1990; Reardon, 1991; Wood & Eagly, 1981). Therefore, organizations that send messages that are apparently not in their best interests should be seen as even more credible than before they sent the message, even if they were perceived as credible before they sent the disconfirming message.

**H4:** When the Air Force homepage presents information that is apparently at odds with its own best interests, participants will rate the Air Force as more credible than will participants exposed to a treatment in which the Air Force presents positive information about the Air Force.

Journalistic style. As previously noted, Greenberg and Miller (1966) found that the writing style of a story they used in a study might have affected the credibility rating of the source. Previous research has found that vocabulary range can have an impact on source image and, therefore, on the source's credibility (Bradac, Courtright, Schmidt, &

Davies, 1976; Bradac, Davies, Courtright, Desmond, & Murdock, 1977; Reardon, 1991).

Sophisticated messages tend to give the source added credibility. Consequently, the wording of the stories used in the study is consistent across all conditions (TV, media-sponsored WWW homepage, and Air Force-sponsored homepage), with some minor variation between the print style on the Web treatments and the broadcast style in the TV treatments. Further, the style used is consistent with the news style the Air Force and the news media use.

Interestingly, the reverse is also true: People's image of the source can also impact their impression of the quality of the message. "Judgments of content characteristics, such as how well the facts in a given communication justify the conclusion, are significantly affected by variations in the source" (Hovland, Janis, & Kelley, 1953, p. 29), with high credibility sources being rated as more fair and justified in their conclusions than low credibility sources.

Furthermore, it appears that the journalistic practice of including quotes from journalists' sources (i.e., individuals involved with the event or issue at hand) affects the credibility of a story. Sundar (1998) found that "the presence of quotes in online news stories enhances the perceived credibility and quality of the stories" (p. 62). Sundar (1998) defined credibility generally as objectivity in reporting. These results must be carefully interpreted, however, because Sundar (1998) himself cautions, "Subjects in the experiment might have been reacting to . . . perceived editorializing on the part of the writer when they made their evaluations, and not really responding to the absence of source attribution" (p. 64).

All messages in this study include quotes from story sources, not only to eliminate the possibility of a confounding variable, but also because it is standard journalistic practice, and the stories were designed to be realistic.

Involvement. Several theoretical perspectives illuminate the impact that a receiver's involvement with a message can have on perceived source credibility and media credibility. Attribution theory, social judgment theory, and the elaboration likelihood model can all be used to highlight the importance of accounting for subject involvement with message content in source credibility studies.

Unfortunately, the measure of involvement is problematic (O'Keefe, 1990). Definitions of a person's involvement include the following: whether a stand on the issue is central to sense of self; the issue's importance to the person; the issue's relevance to the person; the degree of commitment the person has to the position; and the degree of intensity with which the position is held (O'Keefe, 1990; Sereno, 1969). Stamm and Dube (1994), however, describe intensity and involvement as two completely separate components of attitude, and argue that the two must not be confused. Johnson and Eagly (1989) define involvement as "a motivational state induced by an association between an activated attitude and the self-concept" (p. 290). For the elaboration likelihood model (ELM), "the concept of 'involvement' amounts to the direct personal relevance of the topic to the receiver" (O'Keefe, 1990, p. 111). All this goes to show that the operationalization of involvement is complex, and may vary with different research objectives.

Johnson and Eagly (1989) distinguish between three distinct types of involvement: (1) value-relevant involvement, which is based on the recipient's "enduring values;" (2) outcome-relevant involvement, based on the receiver's "ability to attain desirable outcomes;" and (3) impression-relevant involvement, based on "the impression they make on others" (p. 290). For this study, receivers' involvement is expected to vary along the first dimension—value-relevant involvement. Johnson and Eagly's (1989) meta-analysis of involvement indicates that high value-relevant involvement will lead to less likelihood of persuasion. Because source credibility has been shown to be a factor in persuasion (O'Keefe, 1990), people who find the messages less persuasive or acceptable (i.e., highly involved people) should also see the source as less credible.

Based on attribution theory, Gunther (1992) argues that people may see a source as more or less credible depending on their own relationship to or involvement with the message. Additionally, "Attribution theorists suggest that perceivers are concerned with establishing the validity of the information they receive . . . Often the accomplishment of this task requires a close look at contextual rather than personal source attributes" (Reardon, 1991, p. 58). However, receivers are more likely to attribute actions to personal source attributes if they see the source making a choice between alternative courses of action. "If the alternatives have noncommon effects or if they are non-normative, then the choice will provide dispositional information" (Trenholm, 1989, p. 79).

As a consequence, if a source is seen as having the alternative of telling a news story that is apparently not in line with the source's best interests (i.e., non-normative

alternative), the receiver is likely to make a dispositional inference about the source; specifically, that the source is credible, because only an informed and trustworthy source would distribute information that is not in his or her own self-interest.

The same situation may be accounted for by the discounting and augmentation principles of attribution theory (Trenholm, 1989). The discounting principle states "the role of a given cause in producing a given effect is discounted if other plausible causes are also present" (Trenholm, 1989, p. 80), while the augmentation principle holds that if behaviors occur despite other external factors, dispositional attributions will probably be made. Consequently, correspondent inferences and discounting and augmentation principles "suggest that unexpected or non-normative behavior will be more readily believed than expected or normative actions. A source who takes an unexpected stand . . . makes more impact than a predictable source" (Trenholm, 1989, pp. 81-82).

This parallels the concepts of the peripheral versus central routes to persuasion as described in Petty and Cacioppo's (1981) elaboration likelihood model. The central route is taken when receivers consider the arguments presented, but the peripheral route is taken when the receiver makes decisions based on non-issue-relevant cues, such as "impression management motives, the attractiveness of the message's source, or one's social role" (Petty & Cacioppo, 1981, p. 263). Source credibility is a peripheral cue, so it is likely that people who are not highly involved in the message (and therefore unmotivated to think about the message) will be more influenced by source credibility cues than people who are involved with the message content (O'Keefe, 1990; Zanna, 1993). The danger here is that in the necessarily artificial research situation, participants

might attend to the message content more than they would in a natural setting and, therefore, might be less influenced by source credibility in a research setting.

Alternatively, it is possible that in a research setting, participants are more attentive than they would be in a natural setting, and thus are more conscious of who the source is.

According to social judgment theory, people with high ego involvement in an issue will have narrow latitudes of acceptance for messages, while people who are not ego-involved with an issue will have wide latitudes of acceptance for messages (O'Keefe, 1990). "One might well expect that, on the whole, higher involvement, more extreme attitudes, and larger latitudes of rejection would go hand in hand" (O'Keefe, 1990, p. 40). Stamm and Dube (1994) take this line of reasoning one step further: "Within the rubric of social judgment theory 'high involvement' is thought to produce a wider latitude of rejection. Frequent rejection of message content might thereby result in loss of credibility for the source" (p. 109). They go on, however, to note that studies have not been conclusive on this point (Stamm & Dube, 1994).

O'Keefe (1990) cites several studies that show that "as the receiver's involvement in the issue increases, the effects of communicator credibility diminish" (p. 106). Gunther (1988) found specifically that people who were most involved with an issue were also most skeptical of mass media, and he later added that "high involvement prompts not only more scrutiny but more biased scrutiny of media content and therefore increases the likelihood that a person will take a skeptical view of the source of that content" (Gunther, 1992, p. 161).

Because the present study is focused on credibility, it is desirable to maximize the effects of credibility; therefore, this study employs low-involvement topics. Low-involvement topics are also desirable in order to avoid possible confounds associated with high-involvement topics. Serano (1968) notes that for college students, topics of high involvement focus on interpersonal concerns and focus on relations with the opposite sex, grades and classes, future employment, and marriage. For the sample of college undergraduates, childcare and food handling safety were expected to be low-involvement topics. Involvement was measured in the study to determine if participants did, in fact, find these to be low-involvement topics.

#### Receiver

As individuals, there are many dimensions along which receivers vary, many of which have an impact on perceived credibility of TV and WWW news. These receiver factors cannot be held constant, and many factors (such as whether a message is discrepant with the receiver's own viewpoint) are not measured in this study. The receiver factors that are measured in this study are the relative perceived credibility the receiver ascribes to the media and to the Air Force, and the relative perceived credibility of TV and the WWW.

Cognitive dissonance theory, though it has its flaws, is still in place, largely because there is currently no other suitable paradigm (Reardon, 1991). The theory holds that people find dissonance an uncomfortable cognitive state, and therefore try to reduce or eliminate dissonance. Festinger (1957) claims that people try to reduce cognitive dissonance by (a) retracting the decision, (b) decreasing the attractiveness of the



alternative they didn't choose, (c) making the chosen alternative more attractive, or (d) creating cognitive overlap (finding similarities) between the options.

Cognitive dissonance bolsters the second hypothesis, which states that people who get at least some of their news from the World Wide Web perceive the WWW to be a more credible news source than people who do not routinely use the WWW as a newsgathering tool. People who use the WWW as a news source are likely to think of the WWW as a credible source, because it would introduce uncomfortable dissonance to gather news from a source they don't trust or believe. Nielson and Morkes (1998, p. 2) "found that credibility is important for Web users, since it is unclear who is behind information on the Web and whether a page can be trusted." On the other hand, people who don't use the WWW to gather news may have numerous reasons or rationalizations for not using the Web, one of which could be that they don't think information posted on the WWW is credible.

Choosing between two media is not the only time people make a news choice based on dissonance. Zanna and Del Vecchio's (1973) study on the perceived credibility of television news found that the more people perceived television to reflect their own views, the more credible they found television. They base their findings on attribution theory, stating, "In order to avoid the implications of counterattitudinal information, newscasters may be perceived as unbelievable and possibly biased" (Zanna & Del Vecchio, 1973, p. 213).

Receiver motivation can affect the likelihood that news users will make credibility assessments of news sources. "While the individual has attitudes of reliance

and trust toward various kinds of communicators, the extent to which these attitudes are evoked at any given time depends to some degree upon the kind of situation in which he finds himself" (Hovland, Janis, & Kelley, 1953, p. 47). From a uses and gratifications perspective and using the ELM, source credibility may vary in importance based on a person's motivation for using a particular news source. If receivers are just Web- or channel-surfing for pleasure or to kill time, they are more likely to be using peripheral cues (such as source credibility) when they are watching the news. In contrast, if receivers are purposively seeking news, they are more likely to use fewer peripheral cues, so that source credibility decreases in importance to the receivers.

Demographics can also play a role in credibility assessments. Johnson and Kay (1998) found that females view the Web as more credible than males do, paralleling similar findings on source credibility as a whole (O'Keefe, 1990). They also found that younger people (who are more familiar with the Web than older people) find online newspapers and news magazines to be more credible, and better-educated participants found online political information to be less credible than did less-educated people. Johnson and Kay (1998) note that previous research suggests "that males and those with high levels of education, income, and media use tend to be the most critical of the media in general" (p. 327).

### Summary

Clearly, people's impression of messages can impact their perception of message sources and vice versa. More specifically, perceived source credibility can affect people's impressions of the news an organization disseminates, with higher credibility

sources generally able to gain more acceptance of their messages. For this study, the source is the organization (national news media or Air Force), and source credibility is defined in terms of expertise and trustworthiness. This study aims to quantify the relationship between an organization's credibility and the credibility of WWW sites it sponsors. It also looks for relationships between the news sources people use and the news sources they find credible. Finally, this study explores the effect on source credibility of a message that disconfirms the receiver's expectation. Each of these inquiries represents a step toward addressing the underlying research question:

**RQ:** If the same news report is presented on TV, on a TV-sponsored WWW homepage, and on a homepage sponsored by an organization that is part of the news story, which instance will people find most believable?

Messages can vary infinitely along numerous dimensions, including content, context, and delivery mode. Because this study is primarily concerned with channel differences, rather than message differences, messages must be held constant to the greatest extent possible. In particular, messages must be about low-involvement topics in order to more easily isolate source credibility as a construct. High-involvement messages can lead the receiver to downplay or completely ignore source credibility in their evaluation of the message. In order to more widely apply the study's findings, more than one topic must be presented, otherwise any findings could not be generalized beyond the given topic.

While there is still scholarly debate about the existence or the extent of channel effects, there is ample evidence that the channel can influence the receiver's impression of the message. Thus, this study looks at two different channels (television and the

World Wide Web) to see if there are in fact credibility assessments that may be connected to channel attributes.

Based on theory and past experiments, this study should find that various combinations of source, message, and channel enjoy varying degrees of perceived credibility on the part of the receiver. This study provides an initial step in discovering if there is an optimum combination of sources and channels appropriate to gaining acceptance of particular types of messages.

## Chapter 2

### STUDY DESIGN & METHOD

The previous chapter highlighted properties of the source, message, channel, and receiver that are important to the study of media credibility. This chapter outlines the study used to test the hypotheses and explore the research question posed in Chapter One. The study manipulated news story topics, receiver expectations, and news channels in order to uncover relationships between these variables and media credibility.

#### Hypotheses and Research Question

Based on previous research and theorizing outlined in Chapter One, four hypotheses were advanced and one research question was raised.

- Hypothesis 1: The perceived credibility of a news media organization and the perceived credibility of the Air Force as an organization is directly related to the perceived credibility of messages on their respective WWW homepages.
- Hypothesis 2: People who regularly obtain at least some of their news from the World Wide Web will perceive the WWW to be a more credible news source than people who do not routinely use the WWW as a newsgathering tool.
- Hypothesis 3: People (Web users, as well as non-users) will perceive television as a more credible news source than the World Wide Web.
- Hypothesis 4: When the Air Force homepage presents information that is apparently at odds with its own best interests, participants will rate the Air Force as more credible than will participants exposed

to a treatment in which the Air Force presents positive information about the Air Force.

**Research Question:** If the same news report is presented on TV, on a TV-sponsored WWW homepage, and on a homepage sponsored by an organization that is part of the news story, which instance will people find most believable?

### Study Design

This study was designed to evaluate perceived credibility of news stories presented on television, on a media-sponsored homepage, and on a U.S. Air Force-sponsored homepage. The 2 x 2 x 3 (Topic x Confirm or Disconfirm Expectation x Source) between-groups study design includes two topics (daycare and food handling safety), each with two conditions of receiver expectation (message confirms or disconfirms expectation), on each of the three channels (TV, media-sponsored WWW, and Air Force-sponsored WWW). A balanced design would have included another channel—Air Force-sponsored TV news—but because the general public is not likely to be exposed to Air Force TV news, and to reduce the number of experimental cells, this channel was not included in the study.

The three independent variables (topic, expectation confirmation, and channel) are manipulated in the study. Twelve groups were needed in order to accommodate every possible manipulation of the independent variables. The dependent variables are perceived credibility of the source (with the source being the Air Force WWW homepage, the media-sponsored homepage, or the media TV broadcast), and perceived credibility of the news stories.

Reeves and Gieger (1994) describe three decisions necessary in designing experiments with media messages: "(a) decisions about message samples, (b) decisions about creating variance with messages, and (c) options for assigning people to experimental conditions" (p. 165). These decisions for this study are discussed below.

### Message Samples

When it comes to message selection, it would be ideal to define the entire population of suitable messages (in this case low-involvement, plausible, positive and negative news stories) and randomly pick sample messages (Reeves & Geiger, 1994). But this is impractical, as it would be impossible to define (let alone attain a sampling frame of) all the possible stories suitable for this study. Instead, four distinct messages were created to represent this population.

The message topics were designed to be low-involvement topics for the sample of undergraduate college students. As generally young, healthy individuals with no children, this sample was not expected to find the topics of childcare and food handling safety very personally relevant. Although food safety has been in the news sporadically over the past year, there have not been any major food safety stories originating in the local area.

Another major concern was generating believable news stories. The researcher fabricated stories based on sample news stories from reputable news sources on the WWW (e. g., *The New York Times*, ABC News, and CNN) as models for the manufactured news stories (Appendix A). The TV video clip and the WWW homepages were designed to make respondents believe the samples were taken from actual

broadcasts or WWW pages. The mock TV news stories were produced for the purposes of the study by professional Air Force news broadcasters. The researcher downloaded actual Fox News Web pages ([www.foxnews.com](http://www.foxnews.com)) and inserted the links to mock news stories in the page as if they were downloaded along with the rest of the page.

### Variance with Messages

“Any given message is likely to represent one of a number of possible levels of other message factors, as well as the feature of interest” (Reeves & Geiger, 1994, p. 167). As Jackson and Jacobs (1983) point out, “Generalization about a whole category of messages requires careful analysis of multiple members of the category” (p. 171). Therefore, it is absolutely necessary to have more than one message in the study design to minimize the effects of unintended message variation.

Messages in the study are varied in two ways: by topic, and by positive/negative portrayal of the Air Force. The stories also varied slightly between the TV and the WWW versions purely to make them fit the appropriate journalistic style and thus appear more realistic. Sundar (1998) noted in his study that participants might have rated stories as less credible when they weren't written in appropriate journalistic style. These stylistic variations were necessary, but were kept to a minimum in order to avoid adding a confounding variable to the study.

The study used two different topics in order to be able to generalize the findings beyond just one topic. Using two topics ensured that any variance found in the perceived credibility was not simply due to participants' preconceptions about the topic itself.



For each topic, the message was varied to portray the Air Force either positively or negatively. This variation was made in order to test hypotheses about the effects a message has on perceived source credibility if the message confirms or disconfirms the subject's expectations. A story on the Air Force homepage that portrays the Air Force in a negative light should disconfirm participants' expectations, as it is not usual for an organization to disseminate negative news about itself. To a lesser extent, stories from the news media source that respondents perceive as biased should disconfirm their expectation of unbiased reporting from the professional news media. The survey included a measure to gauge respondents' expectations for the type of news story (positive, negative, or unbiased) they would see on an Air Force- or media-sponsored homepage or broadcast.

#### Assignment to Experimental Condition

In this study, it is assumed that individual differences are not as great as the differences between the message conditions. This assumption is made based largely on Reeves and Geiger's (1994) advice: "If we put our time and money where the variance is, we would probably worry about message samples even more than subject samples" (p. 167). "The most fundamental objection to between-subjects factors is the amount of error associated with individual differences, differences that are not likely to be of particular import" (Reeves & Geiger, 1994, p. 174). Based on this, and in order to avoid having to counterbalance study results, the study used a between-subjects design.

Each group of participants was exposed to one treatment of the message, making it necessary to have 12 separate groups. "The most significant advantages of this design

are its simplicity and the absence of the influence of message presentation order or other treatment levels on responses . . . Another advantage is that there is less opportunity for time-based influences on results such as an increase in performance with experience, or for fatigue" (Reeves & Geiger, 1994, pp. 173-174). There is inherently between-subject variance, so participants should be randomly assigned to experimental conditions.

### Media Credibility Scales

Semantic differential scales are commonly used to measure dimensions of credibility. Tucker (1971) argues that semantic differential scales can take on different meanings as a function of the concept they are supposed to measure. McCroskey (1981) acknowledges this, but rejects Tucker's (1971) suggestion that researchers use factor analytic studies instead. McCroskey (1981) says that different factor analytic studies are likely to arrive at different dimension of source credibility each time, hindering coherent research of the construct. Delia (1976) also notes that factor analyses may be contributing to a departure from the original credibility construct.

Gaziano and McGrath (1986) developed a list of 12 items that loaded on a credibility factor in a factor analysis of items for newspapers and television. The 12 items are: fair/unfair, biased/unbiased, tells/doesn't tell the whole story, accurate/inaccurate, invades/respects people's privacy, does/doesn't watch after reader's (or viewer's) interests, is/isn't concerned about the community's well-being, does/doesn't separate fact and opinion, can/cannot be trusted, is concerned about public interest/about making profits, factual/opinionated, and has well-trained/poorly-trained reporters (Gaziano & McGrath, 1986). Meyer (1988) distilled the list of items down to five, which

“make closely equivalent contributions to the additive index” (p. 573). Meyer’s (1988) five scale items are fair/unfair, biased/unbiased, tells/doesn’t tell the whole story, accurate/inaccurate, can/cannot be trusted. This list of five semantic differential items is preferable to the longer list and helps alleviate error due to respondent fatigue. This study used Meyer’s (1988) five-item scale, which has shown good reliability with a Cronbach’s alpha of .83 (p. 573), to measure credibility of TV vs. WWW.

Shaw (1973) cautions media credibility researchers about a correlation between media use and media credibility. People may be inclined to report their preferred medium (i.e., the one they normally depend on for their news) as the most credible, because to say they usually use a medium that they do not believe would induce cognitive dissonance. The results of Johnson and Kaye’s (1998) study bear this out. “The validity of the credibility measure would probably be increased by not employing the source and believability items in tandem within an interview schedule” (Shaw, 1973, p. 311). This caution is noted, and the survey separated these items so they appeared on different parts of the survey (one on the first part, and one on the second part), although it is important for this study to include both measures.

#### Institutional Credibility Scales

This study evaluated the credibility of institutions by using semantic differential items to measure the factors of trustworthiness and expertise, as these factors are common to all credibility scales (O’Keefe, 1990). Other factors commonly included in source credibility factor analyses, such as dynamism and sociability, are not included

because they are more measures of source image than of source credibility (Trevisani, 1992).

Respondents were asked to evaluate credibility of four different institutions: the two of interest—i.e., the Air Force and national television media—and two distracters, which are the Delaware State Police and the Internal Revenue Service (IRS). In order to avoid scale sensitization, two different credibility scales were used for the institutions, with each scale including semantic differential items for expertise and trustworthiness from existing credibility scales (Berlo, Lemert & Mertz, 1969; McCroskey, 1981; O'Keefe, 1990). One scale consists of the dimensions competent/incompetent, experienced/inexperienced, skilled/unskilled, informed/uninformed, honest/dishonest, just/unjust, and selfish/unselfish. The other consists of knowledgeable/unknowledgeable, qualified/unqualified, trained/untrained, expert/not expert, trustworthy/untrustworthy, fair/unfair, and open-minded/close-minded. In order to account for any possible effects of using the two different scales, half the surveys asked respondents to rate the Air Force using the first scale and to rate national television news media using the second. The other half of the surveys asked respondents to rate TV news media with the first scale and the Air Force with the second. Each scale was used once for each of the distracter institutions.

Additionally, the study used semantic differential scales to measure respondents' perception of whether the institution has the public's best interest in mind. This measure is included in order to account for the motivation that respondents attribute to the source. (As discussed previously, a respondent who finds a message believable, but does not trust

the communicator's motivation, will find the source less credible than if the respondent feels the source has no ulterior motives.) The semantic differentials used to measure institutional motivation or intent clustered together in a factor analysis from a data set from a previous study (Eveland, McLeod, & Signorielli, 1995), with Cronbach's Alpha = .74.<sup>1</sup> They are: Watches after people's interests/doesn't watch after people's interests, is/isn't concerned about the nation or community's well-being, is/isn't concerned with the public. Because there are only three of these social responsibility dimensions, the survey asked respondents to rate all three for each institution.

Thus, each institution was rated on four expertise items, three trustworthiness items, and three perceived motivation or social responsibility items.

#### Measurements of Involvement

There are many definitions of involvement, none of which are easily operationalized. Gunther (1992) operationalizes involvement as belonging to a given group (e.g., Catholic, Democrat, African-American). Stamm and Dube (1994) argue that Gunther's method may confuse attitude intensity (how strongly someone feels about an issue) with involvement. Instead, they measured involvement "using a 5-point scale that asked 'Please tell us how much this issue has been on your mind lately.' Responses ranged from 'not at all' to 'a great deal'" (Stamm & Dube, 1994, p. 113). Petty and Cacioppo (1986) use "involvement" and "personal relevance" almost interchangeably. They manipulate involvement by telling participants the issue will affect them personally

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<sup>1</sup> This author has personal contact with the second and third authors of the study, and was therefore able to look at the data set for the cited study and determine the value for

(e.g., change in campus co-ed visitation hours at their own university) or by indicating the issue will not affect them directly (e.g., change in visitation hours at a distant college).

Wilmot (1971b) notes that operationalizing involvement is difficult, but that involvement may be thought of as synonymous with “importance” or “relevance” of an issue—an observation that mirrors Petty and Cacioppo’s (1986) conceptualization of involvement. He also examines three methods for measuring ego-involvement (Wilmot, 1971a). The first, the “ordered alternatives” method, requires subjects to select the one most acceptable position out of nine alternatives that range from very favorable to very unfavorable on an issue, making the operational definition of involvement “the size of the latitude of rejection, either absolute size or in relation to latitude of acceptance” (Wilmot, 1971a, p. 219). However, this method fails to describe what size of the latitude of rejection corresponds to high or low involvement (Wilmot, 1971a).

The second measurement technique Wilmot (1971a) describes is the “own categories” method, in which participants sort a large number of statements (ranging from favorable to unfavorable) into self-determined categories of unfavorable and favorable statements. The idea is that participants with high involvement in the issue will generate fewer categories (indicative of their polarized view on the issue) than will participants with low involvement. Wilmot (1971a) dismisses this method: “The disproportionate piling of statements in one category is impossible to use as an

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Cronbach’s Alpha for the items of interest from the data set.

operational definition unless the experimenter severely misuses the chi-square statistic, as did Sherif and Hovland" (pp. 219-220).

The final method Wilmot (1971a) describes is one invented by Diab (1976) that combines a semantic differential scale with latitudes of acceptance and rejection. The scale requires participants to indicate on a semantic differential scale their preferred position, all acceptable positions, unacceptable positions, and noncommittal positions. This method, though unwieldy, has not been attacked like the other methods, but Wilmot (1971a) cautions that "it is impossible . . . to determine which of the operational definitions reflects ego-involvement most accurately" (p. 226).

Ward (1966) and Campbell and Tesser (1984) used a much simpler method to measure involvement: these researchers used three questions (answered on a Likert-type scale) to determine if the topic was a low-involvement issue for participants. For each of these studies, researchers were interested in involvement's impact on their study, although the involvement construct was not the actual focus of the study. Ward (1966) asked respondents (a) how strongly do you hold your opinion on the subject? (b) how personally involved do you feel toward this whole issue? and (c) how much does (or could) this issue personally affect you? Campbell and Tesser's (1984) questions were somewhat different, as they were devised for a different study with a different emphasis. Their involvement scale had a Cronbach's alpha of .64, indicating marginal reliability (Campbell & Tesser, 1984).

For the purposes of this study, involvement is being measured simply to confirm that the topics chosen are low-involvement topics for the sample; involvement is not of

primary concern. Measuring involvement is a precaution against a confounding variable that would be introduced if the topic turned out (unexpectedly) to be a high involvement issue for the sample population. Because the measure of involvement is incidental, not central, to the study, involvement was measured using two questions with face-validity for the involvement construct, similar to Ward's (1966) three items, but more complete than Stamm and Dube's (1994) one-item scale. The specific questions were: (a) How much do you think the following issues directly affect you on a day-to-day basis? and (b) How personally involved do you feel toward the issue? Responses were measured on a seven-point Likert-type scale and averaged to obtain a mean score between one (lowest possible involvement) and seven (highest involvement). Mean scores between one and four were considered low involvement, 4.1 to 5.5 medium involvement, and 5.5 to seven high involvement. These ranges are roughly in line with Ward's (1966) criteria, but slightly more stringent for the low involvement set, because that is the important end of the scale for this study.

### Method

The participants were 315 students taking undergraduate communication courses at the University of Delaware. They received extra credit in their communication course for participating in the study. There was no extra credit for completing only the first part of the study, so attrition rates between the first to the second part of the study were very low (five participants completed the first part but not the second part). An alternative extra credit assignment was available to students who did not want to participate in the study.



For a medium effects size, each of the 12 cells had to have at least 23 people (power = .80, significance = .05) (Cohen, 1977). Actual cell sizes ranged from 25 to 28 participants, after deleting results from participants who knew of the researcher's connection with the Air Force, because their responses regarding Air Force credibility might be colored by the knowledge that an Air Force member would be evaluating the data.

### Survey

A pencil-and-paper survey (Appendix C) was administered to the respondents in two parts; respondents completed the first part before they saw the broadcast or homepage, and after the treatment students completed the second part. Administering the survey in two parts was necessary in order to measure respondents' expectations prior to exposing them to a story. Time between the first and second half of the survey ranged from five days to three weeks, depending on the subject's availability, with most participants completing the second part between one and two weeks from the time they did the first half. This gap between the first and second part of the survey was designed to reduce scale sensitization effects.

Participants reported to a meeting room during pre-designated periods of time to complete the first part of the survey, which included a consent form adapted from Stacks and Hocking (1992), and approved by University of Delaware Human Subjects Committee (see Appendix B). After the students completed the survey, the consent form was detached from the survey to ensure participants' anonymity, and participants signed

up for a date and time to return to view the stimulus material and complete the second half of the survey.

Participants wrote a four-digit number of their choosing on each part of the survey, so that each subject's pre-treatment responses could be anonymously matched to post-treatment responses. The researcher did not keep any record of numbers individuals picked in order to ensure subject anonymity. Each part of the survey also included basic demographic data as another way to try to match surveys for participants who forgot their four-digit number when they completed the second part; however, several surveys were not included in the study because they had unmatched numbers from the first and second half of the survey and the demographic data was not specific enough to be 100 percent sure of a match.

Besides being a tool for matching surveys, demographic data were important to the researcher because demographics have been shown in previous studies to reflect different perceptions of credibility (O'Keefe, 1990; Johnson & Kaye, 1998). The survey also measured institutional credibility and motives, respondents' involvement with the topics, credibility of different types of media, how and how often respondents use news, credibility of the news stories, and how often and why people use the WWW as a news source.

The study did not strictly randomize participants to the different treatments; however, the procedure was designed to minimize effects of self-selection by randomizing the treatment shown. Participants were allowed to choose from a list of available options the date and time to return for the second portion of the study, but they

did not know whether they would be seeing a TV or WWW treatment. The researcher then pulled treatment conditions out of a hat to decide which treatment would be used during a given time slot. While this is not exactly random assignment of participants to experimental conditions, it is the best practical alternative, because requiring each student to return at a particular time of the researcher's choosing would doubtless result in a higher than normal attrition rate for participants. Due to space limitations, there were at least two sessions for each Web treatment and at least three sessions for each TV treatment.

Several catch-up sessions were required for Web treatments that exposed different people in the room to different messages. In these cases, students sat at the computer of their choice, but had no indication what treatment (i.e., which story from which source) was on that particular computer. In addition, several participants made individual appointments with the researcher if they could not attend one of the group sessions.

Groups exposed to a television sample met in a research lab for the treatment and the second part of the survey. The researcher used a scripted introduction to introduce the video segment as a FOX News Channel clip taped in Denver (in order to explain why none of the respondents would have seen the clip). The researcher explained that FOX television is beginning the news channel to compete with CNN and other national news networks. FOX television was chosen as the cover story for the clips, because FOX television is a known media entity, but has not established stations in the local cable market. Therefore, most respondents should not have ingrained preconceptions about FOX's news credibility as they would for more established news networks. A 25-inch

monitor was used for the tape playback. Several seconds of a blank screen led into the beginning of the clip to allow participants time to settle and focus their attention on the video clip.

Each television story was approximately a minute and a half to two minutes in length. The messages were developed by the researcher based on actual news stories about childcare and food preparation safety. For each topic, one story contained information that would be seen as bad news from the Air Force's perspective, and one story contained good news about the Air Force. The researcher originally wrote the stories in a newspaper journalistic style, which is what appears on the WWW treatment (Appendix D). The wording of the story was adapted for television broadcast by professional Air Force news broadcasters (Appendix E).

Participants exposed to a WWW treatment met in a University of Delaware computer center for the second part of the survey. The WWW page for the particular group was pre-loaded on each computer, but the computer screen was off when participants entered the room. Participants were instructed to leave their screens off until the researcher had given the scripted introduction and the group was ready to begin. The introduction stated that the WWW page participants were going to see was downloaded either from the Air Force homepage (for some groups) or from the FOX News Channel homepage. After the introduction, participants were instructed to turn their screen on, and the appropriate homepage treatment came into view. The homepage stories included pointers for hotlinks to related sites for the story, consistent with the style employed on real media- and Air Force-sponsored homepages. However, in order to keep participants

focused on the particular story in question, actual hot links off the story page were not be available. If participants clicked on the wrong hotlink, they were linked to a message that the referenced site was not copied, and were directed to go back to the parent page.

Following TV or homepage exposure, respondents completed the second part of the survey, and wrote their four-digit number on the survey so the researcher could match the first and second halves of their survey. When the surveys were completed, participants were debriefed verbally and in writing to ensure they understood that the stories and the broadcast or homepages were fictitious. They signed a debriefing statement (Appendix B) to indicate their understanding that the stories were fictitious, and to indicate their agreement not to discuss the study with friends and classmates until the end of the semester.

As part of the debriefing, participants received a handout with factual information about the Air Force and its procedures and positions on childcare or food safety (depending on the message to which they were exposed). This information came from Air Force public affairs and food handling experts. The handout included URLs for FOX television and the Air Force homepage and the researcher's e-mail address. Participants also had the opportunity to add their name to an electronic mailing list so that the researcher can send respondents a synopsis of the findings when the study is complete.

## Chapter 3

### RESULTS

Data were analyzed to determine scale reliability for the involvement, story credibility, organization credibility, and channel credibility scales. Additionally, data were checked to ensure that some of the study conditions disconfirmed subject expectations as they were designed to do. Subsequently, each hypothesis and the research question were analyzed.

The sample consisted of 315 undergraduates taking communication classes at the University of Delaware. The sample included 220 women, and 95 men, with an average age of 20.08 ( $SD = 1.95$ ). Most of the participants were sophomores ( $n = 131$ ) and juniors ( $n = 118$ ), with 64 seniors, and only two freshmen. More than half of the participants were communication majors ( $n = 172$ ) or communication interest majors ( $n = 30$ ). Other majors represented included business ( $n = 20$ ), fashion design ( $n = 8$ ), psychology ( $n = 7$ ) and consumer economics ( $n = 7$ ) as well as others. The sample was primarily Caucasian ( $n = 273$ ), and had an average family with annual income of \$70,000 - \$85,000.

More than 90 percent of the participants ( $n = 285$ ) have a home computer, and almost all ( $n = 309$ ) have television. When asked about how often they used national news in the past week, participants reported that on average they read the newspaper an

average of two days ( $M = 2.09$  days per week,  $SD = 1.73$ ), watched television news an average of three days ( $M = 2.98$ ,  $SD = 1.92$ ), read a news magazine less than once ( $M = 0.78$ ,  $SD = 1.22$ ), listened to national news on the radio less than once ( $M = 0.94$ ,  $SD = 1.64$ ), and used the WWW to get national news less than once ( $M = 0.62$ ,  $SD = 1.36$ ). People who used television to get national news spent an average of 20.92 minutes ( $SD = 20.3$ ) with that news source. The modal response to this item was 30 minutes. The newspaper users spent an average of seven minutes ( $SD = 11.80$ , mode = 0), and WWW users 2.73 minutes ( $SD = 8.97$ , mode = 0). The participant pool as a whole considered itself to be aware of the major stories, though not much of the background of the stories.

The pool consisted of fairly heavy WWW users; participants use the WWW an average of twice or more a week. People reported using the Web for the following reasons: to be entertained ( $n = 181$ ), to do research for school ( $n = 180$ ), to pass the time away, particularly when they are bored ( $n = 140$ ), to relax ( $n = 84$ ), to forget about work and other things ( $n = 64$ ), to satisfy a habit ( $n = 22$ ), to feel excited ( $n = 9$ ), to get news and information unrelated to school ( $n = 9$ ), and to feel less lonely ( $n = 6$ ).

People who did not use the Web chose not to because they do not have enough time ( $n = 77$ ), they are just not interested ( $n = 34$ ), they are not good with computers ( $n = 19$ ), they do not know how ( $n = 9$ ), or because they think the WWW is too hard to access ( $n = 9$ ). It should be noted that some participants reported that they use the Web, but then also responded to survey items asking why they do not use the Web. People who said they do not use the Web for specifically for news also cited time constraints as the primary reason they do not use Web news ( $n = 92$  out of 206 who responded to this item).

For people reporting that they use the WWW for news, visits to these sites ranged from five to 60 minutes per Web news site, with most reporting visits of about 10 minutes. Most people who report using news Web sites use sites sponsored by newspapers. Participants reported regularly visiting sites sponsored by national newspapers ( $n = 71$ ), by network television ( $n = 56$ ), by cable television ( $n = 49$ ), by local newspapers ( $n = 42$ ), by national magazines ( $n = 35$ ), and by radio stations ( $n = 11$ ). Respondents could choose more than one response for this survey item.

Participants were more familiar with national television news media than they are with the Air Force. The mean response to a familiarity question was 2.04 ( $SD = 1.47$ ) on a seven-point scale for the Air Force, where one is "Not at all familiar," and seven is "Very familiar." The mode response was one. For national television news media, the participants average response was 4.17 ( $SD = 1.61$ ) on the seven-point scale, with a mode response of five.

The sample was nearly evenly divided into twelve groups for each combination of study conditions, with the smallest group containing 25 participants and the largest 28. As a result, the study had adequate power to detect medium effects sizes. Data were analyzed as described below using SAS data analysis computer software.

### Scales

The various scales used in the study were factor analyzed and checked for reliability.



### Involvement

The two involvement scale responses were analyzed to ensure that the topics chosen for the study were relatively low-involvement topics, with mean scores of four or less on each of the two seven-point scale items indicating low involvement. The involvement measures asked participants to rate on a scale of one (not at all) to seven (very much) (a) how much each issue affects them on a day-to-day basis, and (b) how personally involved they feel toward each issue.

Six issues were listed for each scale, in order to avoid highlighting the topics of the mock news stories used in the study. The topics of particular interest were restaurant kitchen cleanliness and childcare worker training. Binge drinking was used as one distracter, as it was expected to be a high involvement topic for this group of participants, as a result of heavy local media attention to a controversial university issue.

Results for these items are tabulated below (Table 1).

Table 1: Subject Involvement in Issues

Issue	How much does this issue affect you on a day-to-day basis? (Seven-point scale)		How personally involved do you feel toward the issue? (Seven-point scale)	
	Mean	SD	Mean	SD
Restaurant Kitchen Cleanliness	4.66	1.89	3.97	2.16
Childcare Worker Training	2.56	1.75	2.60	1.87
Binge-Drinking	4.29	1.93	4.26	1.99

These results indicate that involvement in the restaurant kitchen cleanliness issue did not meet the criteria for a low-involvement topic. Childcare worker training, on the other hand, was definitely a low-involvement topic for this group of participants. As expected, the binge-drinking topic was highly involving for this group, lending weight to the face validity of the method used to gauge involvement.

### Story Credibility

Story credibility was measured using Meyer's (1988) five-item credibility scale. Factor analysis showed all items loaded on one credibility factor, with excellent reliability. This scale was also found to be reliable ( $\alpha = .94$ ).

### Source Credibility

The pre-treatment perceived credibility of the Air Force and national television news organizations was measured using two similar, but different credibility scales. Different scales were used in order to reduce scale sensitization. Half of the participants evaluated Air Force credibility using the first scale (Scale A) and national TV news organizations using the second scale (Scale B). The other half of the participants evaluated Air Force credibility using Scale B and national TV news organizations using Scale A. Results of rotated factor analyses of Scales A and B are shown in Table 2.

A rotated factor analysis of Scale A showed the scale included two factors. Five items loaded highly on a credibility factor, two loaded moderately on the credibility factor, and three items loaded on a social concern factor, as expected. Cronbach's Alpha for credibility was .87, and for social concern was .84.

Table 2: Source Credibility Factors

	Factor 1 (Credibility)	Factor 2 (Social Concern)
<b>Scale A</b>		
Competent	[.781]	.140
Honest	[.763]	.140
Experienced	[.722]	.130
Just	[.757]	.196
Skilled	[.684]	.150
Unselfish	[.467]	.114
Informed	[.534]	.251
Concerned with the public	.132	[.852]
Watches after people's interest	.123	[.909]
Concerned about nation's or community's well-being	.344	[.556]
Cronbach's Alpha	.87	.84
Variance explained	34.1%	20.5%
<b>Scale B</b>		
Fair	[.505]	.177
Knowledgeable	[.438]	.004
Qualified	[.759]	.073
Trained	[.752]	.017
Expert	[.627]	.081
Trustworthy	[.541]	.370
Concerned with the public	.115	[.760]
Watches after people's interest	.040	[.865]
Concerned about nation's or community's well-being	.115	[.770]
Cronbach's Alpha	.77	.85
Variance explained	25.6%	23.2%

Rotated factor analysis of Scale B initially showed response items loading on three factors, with good loading on the social concern factor, but poor patterns for expertise and trustworthiness factors. However, by deleting the open-minded/close-minded item from the scale, the scale collapsed into two factors similar to Scale A. Thus, subsequent analysis using this scale does not include the open-minded/close-minded item. Cronbach's Alpha for Scale B was .77 for credibility and .85 for social concern. Only the credibility factor was used in this analysis.

#### Channel Credibility

Channel credibility was measured using Meyer's (1988) five-item credibility scale. The scale was used individually to determine perceived credibility for TV, WWW, and newspapers. In each case, all items on the scale loaded on one credibility factor in a principal factor analysis, with excellent scale reliability in each case, as shown in Table 3.

Table 3: Factor Analysis of Channel Credibility Scale

	<u>TV</u>	<u>WWW</u>	<u>Newspaper</u>
Fair	.712	.747	.862
Unbiased	.428	.388	.486
Tells the whole story	.629	.643	.712
Accurate	.741	.816	.674
Can be trusted	.561	.704	.771
Variance Explained	39.0%	45.7%	50.7%
Reliability (Alpha)	.93	.97	.98

Notably, the bias item is weaker than other items. This is most likely because participants may have been somewhat confused by the semantic differential scale that put

“biased” and “unbiased” at opposite ends of the scale. While completing the survey, several participants asked the researcher if a response in the middle of the scale indicated non-bias. Perhaps the visual effect of having an “unbiased” response at the end of the scale was confusing. Future studies may want to consider a scale that indicates bias in one direction on one end of the scale and bias in the other direction at the other end of the scale, so that a middle-of-the-scale response would clearly indicate non-bias.

### Hypothesis One

H1 only uses data from respondents who have been exposed to a WWW treatment of the news story ( $n = 209$ ), hypothesizing that the WWW homepages of more credible organizations will be seen as more credible than WWW homepages of less credible organizations. To evaluate the hypothesis, the researcher examined respondents' pre-treatment credibility ratings for the organization that sponsored the page, and looked for a direct relationship between those credibility scores and the respondents' credibility rating of the news story on that organization's homepage. A direct relationship would confirm the hypothesis.

A two-tailed t-test of the difference in credibility between national news media organizations and the Air Force for the entire sample ( $n = 314$ ) showed that participants rate the Air Force as significantly more credible ( $M = 5.22$ ,  $SD = 0.90$ ) than national news media organizations ( $M = 5.08$ ,  $SD = 0.89$ ),  $t(313) = 1.98$ ,  $p < .05$ . This was true for both Scale A,  $t(314) = 6.42$ ,  $p < 0.0001$ , and Scale B,  $t(314) = 2.65$ ,  $p < .009$ .

An ANOVA compared the mean story credibility score of all four mock stories on the Fox News homepage ( $M = 4.78$ ,  $SD = 0.99$ ) with the mean credibility score of the same four mock stories on the Air Force homepage ( $M = 4.47$ ,  $SD = 0.98$ ), and found the means to be significantly different,  $F(1, 205) = 5.15$ ,  $p < .025$ . This result indicates that people who saw the stories on the Fox News homepage thought the stories were more credible than did the people who saw the same stories on the Air Force homepage.

A two-way ANOVA analyzed how story credibility varied with which homepage participants viewed (the Air Force homepage or the media-sponsored homepage) and with story valence (positive or negative for the Air Force). There was a significant effect for both story valence and homepage sponsor, with positive stories ( $M = 4.85$ ,  $SD = 1.02$ ) being more credible than negative stories ( $M = 4.41$ ,  $SD = 0.92$ ), and the media homepage ( $M = 4.78$ ,  $SD = 0.99$ ) being seen as more credible than the Air Force homepage ( $M = 4.47$ ,  $SD = .98$ ). There was no significant interaction effect. Results of this analysis are tabulated and graphically depicted below (Table 4 and Figure 1). Because the results depended on whether the stories were positive or negative, there was no significant across-the-board correlation between Air Force credibility and the credibility of stories on the Air Force homepage.

Table 4: Story Credibility as Function of Story Valence and Homepage Viewed

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Homepage viewed (media or Air Force)	1	5.00	5.00	5.38	.021
Story valence (positive or negative)	1	9.91	9.91	10.66	.001
Interaction	1	0.47	0.47	0.51	.477
Error	205	190.53	0.93		

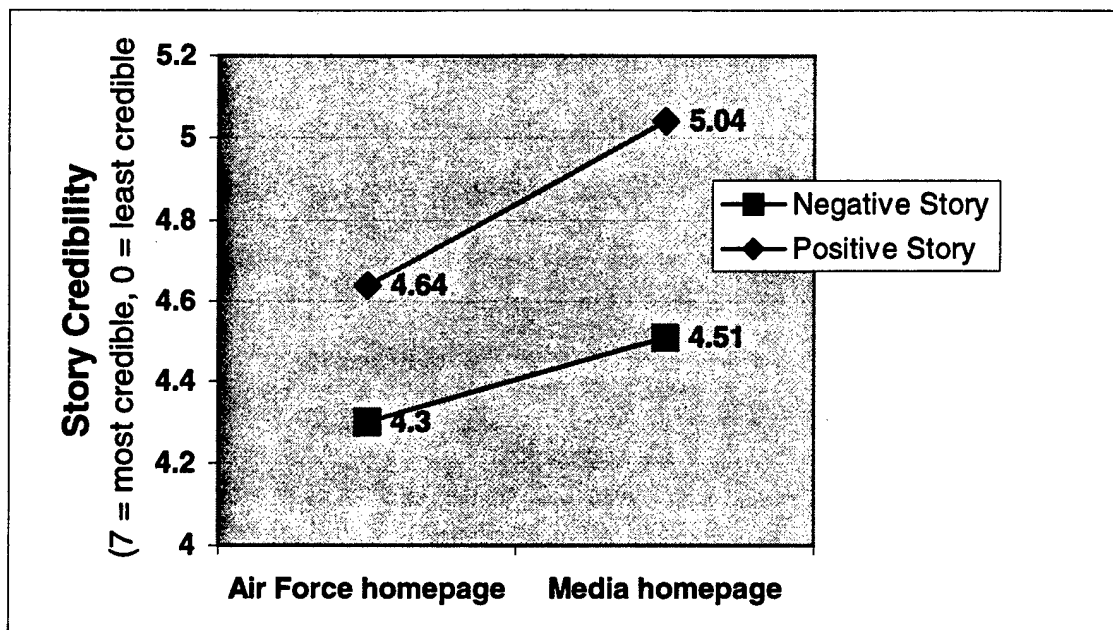


Figure 1: Story Credibility on WWW Homepages

Therefore, because the Air Force was seen as a more credible organization than the national new media, yet participants found the stories on the media homepages more credible than the same stories on the Air Force homepage, hypothesis one was not supported.

#### Hypothesis Two

This hypothesis posited that people who get at least some of their news from the WWW would perceive the WWW to be a more credible news source than people who do not routinely use the WWW as a newsgathering tool. A total of 307 observations were analyzed—170 WWW news users, and 137 non-users. Users were defined as people who used the WWW for news at least one day in the past week, or who used the WWW

for news in the past week, or who reported an average visit of longer than zero minutes to WWW news sites (i.e., responses greater than zero to questions 15, 19 or 25 on the second part of the survey, Appendix C).

The mean WWW credibility score for WWW users was 4.24 ( $SD = .93$ ) on a seven-point scale, and 4.35 ( $SD = .90$ ) for non-users. An ANOVA with Web use as the independent variable and Web credibility as the dependent variable failed to find a significant difference in Web credibility between users and non-users,  $F(1, 305) = 1.05, p < .31$ . A MANOVA of individual credibility items on the five-item credibility scale (Table 5) showed that of all the scale items only the biased/unbiased item on the scale was significant,  $F(1, 305) = 4.65, p < .03$ . The can/cannot be trusted item was the only other scale item that approached significance  $F(1, 305) = 3.11, p < .08$ .

For both of these items, however, the relationship was in the opposite of the expected direction. These items show that users think the WWW news is more biased and less trustworthy than WWW non-users do. Therefore hypothesis two was not supported.

### Hypothesis Three

The third hypothesis was that people will perceive TV to be a more credible news source than the WWW. The hypothesis was tested by comparing the difference in credibility between the two (TV credibility minus WWW credibility) to zero for the entire sample, excluding incomplete responses ( $n = 307$ ). A t-test showed that the difference in the mean credibility scores (1.59) is significantly different from zero,  $t(306) = 6.39, p < 0.0001$ . Results are shown in Tables 6 and 7.



Table 5: WWW News Credibility

<u>Scale Item</u>	<u>Web use</u>	<u>Mean</u>	<u>sd</u>	<u>F</u>	<u>p&lt;</u>
Overall scale	User	4.24	.93	1.05	n.s.
	Non-user	4.35	.90		
Accurate/Inaccurate	User	4.59	1.26	.03	n.s.
	Non-user	4.62	1.17		
Fair/Unfair	User	4.46	1.26	.04	n.s.
	Non-user	4.49	1.16		
Tells/doesn't tell the whole story	User	4.32	1.26	.19	n.s.
	Non-user	4.25	1.36		
Unbiased/biased	User	3.62	1.22	4.65	.03
	Non-user	3.92	1.22		
Can/Cannot be trusted	User	4.20	1.29	3.11	.08
	Non-user	4.45	1.21		

Table 6: Channel Credibility Scores

	<u>Entire Sample (n = 307)</u>		<u>Users of all three channels (n = 75)</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
TV Credibility	3.96	0.58	3.96	0.62
WWW Credibility	4.29	0.92	4.46	0.87
Newspaper Credibility	4.62	1.04	4.54	1.14

Table 7: Relative Credibility of Different Channels

Relative credibility	Entire Sample (n = 307)			Users of all three channels (n = 75)		
	<u>M</u>	<u>SD</u>	<u>t</u>	<u>M</u>	<u>SD</u>	<u>t</u>
TV - WWW	-0.32	0.87	6.39*	-0.50	0.95	4.56*
TV - Newspaper	-0.66	0.90	12.95*	-0.58	0.88	5.69*
WWW - Newspaper	-0.33	1.16	5.04*	-0.08	1.22	0.55 (n.s.)

\*Significant at  $p < .0001$

Credibility scale items were coded so that high scores on the scale indicated higher credibility. The difference was negative, (i.e., the mean TV credibility score was lower than the mean WWW credibility score), indicating that respondents think news on the WWW is significantly more credible than television news.

Furthermore, although newspaper credibility wasn't originally part of the hypothesis, a similar comparison of newspaper credibility to TV and WWW news credibility showed that study participants found newspapers to be significantly more credible than TV news ( $t(306) = 12.95, p = .0001$ ) and significantly more credible than WWW news ( $t(306) = 5.04, p = .0001$ ).

The same analysis was carried out using only data from participants who indicated by survey response that they use all three media (TV, WWW, and newspapers) for national news, (i.e., people who marked a response greater than zero for items 12 or 17 and items 11 or 18 and items 15 or 19 on the second part of the survey, Appendix C). This group of participants rated newspapers as most credible ( $M = 4.54, SD = 1.14$ ), followed by WWW news ( $M = 4.46, SD = 0.87$ ), with TV the least credible of the three ( $M = 3.96, SD = 0.62$ ). The results showed that this subset of participants found TV

significantly less credible than the WWW and newspapers, with  $t(74) = 4.56, p < .0001$  and  $t(74) = 5.69, p < .0001$ , respectively. However, this group did not find significant differences between the credibility of news on the WWW and in newspapers,  $t(74) = 0.55, n.s.$

In sum, respondents, regardless of whether they used all three media, rated newspapers most credible, followed by the WWW news and then TV news. The distinction between the credibility of WWW and newspapers, however, was not significant for people who use all three media. Therefore, this hypothesis was not supported.

#### Hypothesis Four

The final hypothesis stated that when the Air Force included bad news about itself on its own homepage (i.e., when participants' expectations were disconfirmed), it would be seen as more credible than when the Air Force put good news about itself on its homepage.

#### Expectation Confirmation

The survey also measured people's expectations for the type of information about the Air Force they would get from an Air Force WWW homepage. This measure is important in evaluating expectation disconfirmation for this hypothesis—if expectations were not disconfirmed, the premise for this hypothesis would be invalid.

A survey question asked participants to rate, on a scale from one to five, if they would expect news about the Air Force to be (1) very negative, (2) slightly negative, (3)

unbiased, (4) slightly positive, or (5) very positive if they were getting that information directly from the Air Force. A response of three or higher thus indicates an expectation of positive news about the Air Force on the Air Force homepage. The mean response was 4.89, ( $SD = 0.34$ ), and the mode response was "5." No one marked a response less than three (unbiased), indicating that everyone who answered this question ( $n = 314$ ) expected information on the Air Force homepage to be positive or at least unbiased, but never negative. Thus, the expectation disconfirmation condition was satisfied for each subject who read a negative story about the Air Force on the Air Force homepage.

Analysis of this hypothesis compared post-treatment credibility ratings of the Air Force for participants who saw a positive story on an Air Force homepage ( $n = 51$ ) with post-treatment credibility ratings of the Air Force for participants who saw a negative story about the Air Force on an Air Force homepage ( $n = 52$ ). The five-item scale for post-treatment Air Force credibility was reasonably reliable, with Cronbach's Alphas of .78 for people who saw good news on an Air Force homepage, .70 for people who saw bad news on an Air Force homepage, and .75 for the entire group of participants who saw any story on the Air Force homepage.

An ANOVA comparing the mean perceived credibility (post-treatment) of the Air Force for the two groups (those who saw the positive stories and those who saw the negative news stories) showed that people who saw a negative story on the Air Force homepage rated the Air Force as less credible ( $M = 4.14$ ,  $SD = .91$ ) than people who saw a positive story on the Air Force homepage ( $M = 4.68$ ,  $SD = .86$ ),  $F(1, 101) = 9.87$ ,  $p < .002$ . Thus, this hypothesis was not supported.

Further analysis of this hypothesis using a MANOVA to examine responses to each individual scale item showed that the items “fair/unfair” and “can/cannot be trusted” taken individually showed significant differences between people who saw negative vs. positive versions of the stories on the Air Force homepage. Results are shown in Table 8.

Table 8: Perceived Credibility of the Air Force for People who saw Positive or Negative Stories on the Air Force Homepage

<u>Scale Item</u>	<u>Story</u>	<u>Mean Air Force Credibility</u>	<u>sd</u>	<u>F</u>	<u>p</u>
Overall scale	Positive	4.68	.86	9.87	.002
	Negative	4.14	.91		
Fair/Unfair	Positive	5.37	1.26	18.58	.0001
	Negative	4.37	1.09		
Unbiased/biased	Positive	3.96	1.26	.61	n.s.
	Negative	3.77	1.23		
Tells/doesn't tell the whole story	Positive	4.22	1.33	3.13	n.s.
	Negative	3.71	1.55		
Accurate/Inaccurate	Positive	4.86	1.00	3.15	n.s.
	Negative	4.46	1.28		
Can/Cannot be trusted	Positive	4.98	1.14	6.13	.015
	Negative	4.35	1.44		

### Research Question

Finally, the data were analyzed to find out if people would perceive the credibility of the same story differently if the story was presented through the three different channels (television news, media-sponsored homepage, or Air Force homepage).

A MANOVA tested for a treatment effect on story credibility, and found that story credibility varied significantly as treatment varied,  $F(11, 303) = 6.69, p < .0001$ , indicating that at least some of the 12 treatments were significantly more credible than some of the other treatments. The research question asks whether these significant differences vary as a function of the channel. However, a MANOVA for each story with channel (TV, media-sponsored Web, or Air Force-sponsored Web) as the independent variable and each item on the story credibility scale as a dependent variable failed to show significance for any story (Table 9), although the measure approached significance for the positive food service story. Therefore, for any given story or story type, there is no evidence that one channel is more credible than another is.

In all but the negative child care story, participants perceived the Air Force homepage as significantly more biased than the media-sponsored page or TV. This makes sense in light of participants' expectation that stories on the Air Force homepage would be mostly positive and, therefore, biased toward the Air Force.

Table 9: Story Credibility on Different Channels

<u>Scale Item</u>	<u>Treatment</u>	<u>Mean</u>	<u>SD</u>	<u>F</u>	<u>p</u>
<b>Child care (Positive)</b>					
Overall credibility scale	TV	4.24	2.48	<b>1.70</b>	<b>n.s.</b>
	WWW (media)	4.22	2.02		
	WWW (AF)	4.36	2.06		
Fair/Unfair	TV	5.56	1.25	2.03	n.s.
	WWW (media)	5.77	.99		
	WWW (AF)	5.04	1.67		
Unbiased/Biased	TV	4.30	1.54	3.13	.05
	WWW (media)	4.88	1.51		
	WWW (AF)	3.80	1.61		
Tells/Doesn't tell whole story	TV	4.22	1.63	.21	n.s.
	WWW (media)	4.46	1.27		
	WWW (AF)	4.40	1.22		
Accurate/Inaccurate	TV	5.07	1.14	.05	n.s.
	WWW (media)	5.12	1.21		
	WWW (AF)	5.00	1.44		
Can/Cannot be trusted	TV	5.37	1.04	1.62	n.s.
	WWW (media)	5.38	1.13		
	WWW (AF)	4.84	1.49		
<b>Child care (Negative)</b>					
Overall credibility scale	TV	3.83	1.95	<b>1.76</b>	<b>n.s.</b>
	WWW (media)	3.91	2.39		
	WWW (AF)	4.07	3.03		
Fair/Unfair	TV	4.46	1.33	1.38	n.s.
	WWW (media)	4.96	1.30		
	WWW (AF)	5.15	1.48		
Unbiased/Biased	TV	3.96	1.82	.64	n.s.
	WWW (media)	4.35	1.62		
	WWW (AF)	3.85	1.57		
Tells/Doesn't tell whole story	TV	2.81	1.33	.76	n.s.
	WWW (media)	3.19	1.30		
	WWW (AF)	3.23	1.48		

Table 9 (cont.)

Accurate/Inaccurate	TV	4.15	1.16	1.78	n.s.
	WWW (media)	4.69	1.09		
	WWW (AF)	4.73	1.43		
Can/Cannot be trusted	TV	4.31	1.05	2.91	.06
	WWW (media)	4.96	1.08		
	WWW (AF)	4.92	1.16		
<b>Food Service (Positive)</b>					
Overall credibility scale	TV	4.27	2.47	<b>2.24</b>	<b>.06</b>
	WWW (media)	4.32	1.77		
	WWW (AF)	4.45	2.18		
Fair/Unfair	TV	5.85	1.32	.01	n.s.
	WWW (media)	5.82	.86		
	WWW (AF)	5.85	.92		
Unbiased/Biased	TV	5.00	1.59	4.23	.02
	WWW (media)	4.25	1.67		
	WWW (AF)	3.69	1.67		
Tells/Doesn't tell whole story	TV	4.30	1.38	.56	n.s.
	WWW (media)	4.39	1.47		
	WWW (AF)	4.00	1.39		
Accurate/Inaccurate	TV	5.26	1.16	.49	n.s.
	WWW (media)	5.00	1.22		
	WWW (AF)	4.96	1.22		
Can/Cannot be trusted	TV	5.04	1.45	.99	n.s.
	WWW (media)	5.36	1.28		
	WWW (AF)	4.85	1.32		
<b>Food Service (Negative)</b>					
Overall credibility scale	TV	3.92	1.75	<b>1.62</b>	<b>n.s.</b>
	WWW (media)	4.02	2.21		
	WWW (AF)	4.14	2.77		
Fair/Unfair	TV	5.19	1.17	.47	n.s.
	WWW (media)	5.23	1.39		
	WWW (AF)	4.92	1.16		



Table 9 (cont.)

Unbiased/Biased	TV	4.77	1.27	3.91	.02
	WWW (media)	4.65	1.70		
	WWW (AF)	3.73	1.40		
Tells/Doesn't tell whole story	TV	3.23	1.31	.11	n.s.
	WWW (media)	3.38	1.42		
	WWW (AF)	3.38	1.39		
Accurate/Inaccurate	TV	4.69	1.29	.45	n.s.
	WWW (media)	4.92	1.09		
	WWW (AF)	4.62	1.27		
Can/Cannot be trusted	TV	4.77	1.39	.38	n.s.
	WWW (media)	4.77	1.21		
	WWW (AF)	4.50	1.24		

## Chapter 4

### DISCUSSION

This study evaluated the credibility of news on the World Wide Web, based on the premise that credibility of news sources is important to news consumers as they make decisions regarding where they will get their news. Earlier research examining media credibility focused on comparing television and newspaper credibility, but did not include the relatively new venue of news on the World Wide Web.

Specifically, this study explored whether the credibility of the news is related to the credibility of the organization sponsoring the Web site, and whether Web news users found Web news more or less credible than non-users did. In addition, the study investigated the implications for organizational credibility when organizations post news stories that disconfirm readers' expectations on their own homepage. It also explored the question of whether the channel itself (WWW or TV) affected people's perceptions of a news story's credibility.

As with other research on media credibility, this study borrowed heavily from source credibility research. In particular, the Elaboration Likelihood Model, attribution theory, and the theory of cognitive dissonance were the bases for the hypotheses put forward for the research, as outlined in Chapter One. This study explored whether any particular combination of message type (messages that confirm or disconfirm

expectations), channel type (television or WWW), and message source (national news media or the Air Force) would maximize the credibility of a news story.

### Hypothesis One

The first hypothesis was that if participants perceived an organization as more credible than another organization, they would also perceive news stories on that organization's homepage to be more credible than the news stories on a less credible organization's homepage. Past source credibility studies suggest that people see a highly credible source as more likely than a low credibility source to produce a credible message. However, the results for this hypothesis do not bear that out, at least in this particular instance.

Participants rated the Air Force as an organization as more credible than the national news media in pre-treatment surveys; however, in assessing the credibility of stories on Air Force and news media homepages, participants rated the stories on the media-sponsored page as more credible. Possible explanations for this apparent paradox are offered below. Because the stories were identical, these results do not support the hypothesis that a more credible organization will be seen as having more credible messages.

O'Keefe (1990) noted that because a proattitudinal message from a low credibility source requires more cognitive processing for the receiver than the same message from a high credibility source, in conditions of low involvement, high credibility sources are more persuasive for counterattitudinal messages, while low credibility communicators are more persuasive when it comes to proattitudinal messages. To call the Air Force a high

credibility source and the media a low credibility source may be exaggerating, although participants in this study did find the Air Force to be significantly more credible than the media. In this study, there was no measure of the attitude of participants toward the topics, but based on the above, one may surmise that each subject found the messages he or she read to be more proattitudinal than counterattitudinal. However, because there was a positive and negative version of each story, and because participants were not systematically assigned to one version or another, this explanation for the results, while possible, is not probable.

The findings for this hypothesis are in line with results of an earlier study (Ognianova, 1998), which found that "an online news content provider associated with journalism (e.g., a newspaper or a TV network), [is] perceived as most credible, compared to a content provider whose identity is unknown and a content provider whose identity is not associated with journalism" (p. 155). This suggests that even an organization initially seen as more credible than news media is not perceived to be as credible when it comes to disseminating news. While the Air Force may be seen as a credible military force, government organization (or however respondents individually categorize it when reporting their initial impression of credibility), when it comes to reporting the news, even about the Air Force itself, respondents perceived the media to be more credible (as a professional news reporter). To pursue this hypothesis further, a study should pit two non-news media organizations against each other on the WWW, with each reporting the same news story. In this way, the hypothesis of a more credible

organization being perceived as having a more credible homepage could be tested without the possible confound of including a media organization.

Bresnahan (1994) studied college students' use of mass media during the Gulf War. While she found that participants rated mass media more trustworthy than the government, she also found that "respondents evaluated 'the mass media' in general less positively than they rated all its major components" (p. 397). In this study, the initial measure of organizational credibility compared national television news media (in general) with the Air Force. The post-treatment measure, however, evaluated credibility ratings for Fox television news (specifically), which was the sponsor of the homepage where the treatment was presented. The credibility of the specific organization was possibly greater than the credibility of television news media as a whole, so that comparing the pre-and post-treatment TV media credibility ratings compares two separate entities. Replications should word questions to correct this problems, although doing so may limit the generalizability of the credibility measure for media.

Another possible explanation for this result lies in the particular organization used in this study. The Air Force was used as the "other" (i.e., non-media) organization, because the researcher has personal experience as a communicator for the Air Force. However, a study on journalism credibility commissioned by the American Society of Newspaper Editors (Urban & Associates, 1998) found that a majority of people in their study believe that politicians or government officials, big business, and wealthy people exert influence to bias reporters' stories. Because the Air Force falls into the government category, this public perception of government spin possibly affected the credibility of

the stories on its homepage, and the credibility of the stories about it on the media page, to a lesser extent.

The same study (Urban & Associates, 1998) found that while people do see news media as biased, they rely on their own filtering mechanisms to identify and account for bias. Although people in this study may be comfortable with the filtering mechanisms they have in place for media, they are less likely to have equally sophisticated preconceptions of the Air Force, because they don't typically interact with Air Force people or products with the same frequency they do with media products. Therefore, while they may feel the media as a whole are not terribly credible, they have well-developed schemata for making credibility judgments of media stories. When they come across a story on an Air Force-sponsored site, however, they are less equipped to make credibility judgments of the same materials and, therefore, judge the stories to be less credible.

Apparently, then, the Air Force Web page does not offer the types of peripheral cues on its site that would encourage the general public to make a positive credibility judgment about the site and the stories on it. Specifics on what peripheral cues would need to be introduced to increase the credibility of stories on the site should be the topic of a separate study.

In sum, it is possible that the particular organizations chosen for this study may have introduced the unexpected confounds of a government agency and a news organization. A replication of this study should include two non-media, non-government

sources to determine whether organizational credibility is correlated with homepage credibility.

### Hypothesis Two

The second hypothesis was that Web news users would perceive the Web to be a more credible news source than would people who do not use the WWW to get news. While the study failed to show a significant difference between how credible Web news users and non-users think WWW news is, the bias scale item taken alone did show a significant difference between the two groups. The difference was in the opposite direction from that hypothesized, however, indicating that Web news users perceive Web news to be more biased than non-users do. Gaziano (1988) suggested that people are less likely to pay attention to media sources they do not trust, but this study failed to confirm that finding. Gaziano (1988) also suggests that because of a distrust of a media source or channel, people are unlikely to use that source or channel. The results of this study indicate that reversing that line of thinking may be more appropriate and enlightening. People who already use a channel might not find it entirely credible, but this does not keep them from using that channel. Rather, people may develop mental filtering mechanisms to counteract perceived media bias (Urban & Associates, 1998).

WWW news users are possibly more sophisticated and critical news users overall, and are more aware of bias in reporting. Internet users are generally heavy media users (Johnson & Kaye, 1998). In this study, participants were asked to choose a statement that described their news knowledge on a five-point scale, ranging from one ("I never know what is happening in national news,") to five ("I always know what the major stories are

and the background of the stories"). Results show that Web news users rate themselves as significantly more likely to know the major news stories ( $M = 2.40$ ,  $SD = 0.85$  for Web users,  $M = 2.20$ ,  $SD = 0.91$  for non-users),  $F(1, 313) = 4.30$ ,  $p < .05$ . Therefore, for this sample, it is also fair to say that Web users perceive themselves to be more sophisticated news consumers than non-Web users perceive themselves to be. WWW news users, therefore, would be likely to continue to use the WWW as a news source, but would be more likely to do so with a critical eye toward what they find there.

The concept of 'bias' in news reporting is a muddy one. Urban & Associates (1998) found:

While 78 percent of U.S. adults believe there's bias in the news media, but there [sic] no consensus definition of what 'bias' really means. Almost one-third (30 percent) see bias as 'not being open-minded and neutral about the facts'; almost another third (29 percent) believe bias is 'having an agenda and shaping the news to report it'; another third (29 percent) define bias as 'favoritism to a particular social or political group.' Eight percent said that bias is 'all of these' (quoted from press release, <http://www.asne.org/kiosk/news/98jcp.htm>).

Thus, results pertaining to bias alone may be interpreted in multiple ways, particularly in the case of the third definition of bias as favoritism toward a particular social or political group. People may evaluate the WWW as a biased channel because people with higher socio-economic status are its primary users. This one scale item on the survey for this study may, therefore, be tapping into a number of different concepts for different respondents.

So why did Web users fail to rate the WWW as a more credible news source than did non-users? Perhaps because users, as well as non-users, do not have well-formed schemata for WWW news credibility. The data from this study show that of 178 WWW



news users, only 26 (14.6 %) use the Web for news three or more days per week. Because most Web news users infrequently use the Web for news, their schemata for evaluating Web news may not be as well developed as their schemata for evaluating credibility of news in the more traditional channels. Therefore, even though they use the Web as a means to get their news, they are more wary of it because of a relative lack of experience in evaluating what makes Web news credible.

Without offering any explanation, Newport and Saad (1998) note a similar lack of correlation between channel credibility and channel use, finding that people who use a particular type of news outlet regularly do not necessarily report that type of outlet as the most credible. Therefore, just because people ascribe credibility to a particular channel does not necessarily mean that they are more likely to use that channel as a news source. Similarly, people who perceive a particular channel as not credible are not precluded from using that channel for news. In fact, credibility perceptions may actually *decrease* with higher use of the channel, as people become more sophisticated news users.

### Hypothesis Three

Based on a plethora of past research on media credibility, this hypothesis stated that participants would perceive television as more credible than the World Wide Web. Historically, television has been the channel that enjoys highest news credibility ratings (e.g., Gaziano & McGrath, 1986; Roper, 1985). Even as recently as 1998, a Gallup Poll found that "broadcast news has higher credibility than print," (Newport & Saad, p. 30), which had a higher credibility rating than news on the Internet. Therefore, perhaps the most surprising result of this study is that this subject sample found the WWW to be

more a more credible source than television for national news. This sample found newspapers more credible than the Web, which they found more credible than television as a news source. This finding was not unique to any particular topic or story—it was a general impression measured prior to any treatment. While this study uses a sample of college undergraduates, which is not representative of the entire population as were the samples of some previous studies, it is still surprising that results were exactly the opposite of the findings in similar previous studies of the relative credibility of different media.

Even considering only responses from participants who reported actually using all three channels (TV, WWW, and newspaper) for news, the results were similar, except that there was not a significant difference between the credibility of news on the WWW and in newspapers.

Because this sample consisted of college students who are presumably more familiar with the WWW than the general public, perhaps they were more comfortable with the channel and, therefore, found it more credible. However, the findings of Hypothesis Two (i.e., people who use the WWW for news do *not* find it more credible than people who don't use the WWW for news) indicate that perhaps this participant pool's experience with the WWW makes them more critical or sophisticated users than people less familiar with the Web.

Again, looking to the "bias" scale item, this particular item possibly makes a difference in whether people find TV or newspapers (or the WWW) more credible. For instance, a 1998 Gallup poll (Newport & Saad, 1998) found that TV was rated more

trustworthy than newspapers or the WWW. The same study found that people thought Internet news was more biased than national TV news and newspapers, when bias was defined in terms of liberal/conservative bias. However, in the Urban & Associates (1998) study of journalism credibility, more respondents reported that they found TV to be the most biased news media (42%), while far fewer (23%) found newspapers to be the most biased. Given that both studies involved national samples, the concept of bias clearly means different things in different instances, perhaps depending on how it is couched in the study. Therefore, because the credibility scales used in this study include bias as one of a number of scale items, resulting scores for credibility may be quite different than they would be if they included only trustworthiness- and expertise-type items.

#### Hypothesis Four

This hypothesis posited that when the Air Force presented negative news about itself on its own homepage, participants would think the Air Force was more credible than if it presented positive news about itself on its homepage. Previous research (e.g., Eagly & Himmelfarb, 1978; Wood & Eagly, 1981) found that communicators who disconfirm receivers' expectations by taking an unexpected position are seen as more credible than a communicator who confirms receivers' expectations. Furthermore, it seems intuitive that an organization that posts information at odds with its own best interests on its own homepage would only do so if that information really was the truth. However, the results of this study indicate that when negative stories about the Air Force were posted on the Air Force's homepage, participants rated the Air Force as less credible than when positive stories were posted.

One possible explanation for this unexpected result may lie in the expectation disconfirmation element of the study. Bradac, Courtright, Schmidt, and Davies (1976) found that linguistic diversity (meaning the range or variety of vocabulary) of messages can affect people's evaluation of speaker attributes and message effectiveness. Specifically, in a study in which undergraduate university students heard high- or low-diversity messages from supposedly high or low status speakers, they found that, "A high-status speaker was rated especially positively when he delivered a high-diversity message and especially negatively when he delivered a low-diversity message" (p. 213). Later iterations of similar but larger studies found that high status speakers who delivered low-diversity messages were evaluated more negatively on competence, emotional state, and communicative effectiveness than low status speakers who delivered the same low-diversity message (Bradac, Davies, Courtright, Desmond, & Murdock, 1977).

Their findings indicate that a higher status communicator suffers more from a poor message than does a lower status communicator. If participants saw the Air Force as a higher status communicator than the media, Bradac and his colleagues' findings would suggest that the Air Force would be judged more harshly than the media by people reading a negative version of the story.

Another consideration in expectation disconfirmation is that while negative information about the Air Force on the Air Force homepage would definitely be unexpected (as shown by participants' response to a survey item), no survey item asked respondents whether negative information about the Air Force (from any source) would be unexpected. Therefore, while a negative story on an Air Force homepage clearly

disconfirmed participants' expectations, the tone or underlying message of the story (negative information about the Air Force) may not have disconfirmed participants' expectations. This explanation, however, is unlikely, as participants did find the Air Force significantly more credible (including more trustworthy and more expert) than the media. Thus, it does not make sense that they would have generally unfavorable impressions of the Air Force.

Social judgment theory suggests that for a topic important or involving to the subject, the more discrepant a message is (i.e., the more it differs from the subject's previously held opinion or attitude), the more likely it is that a receiver will reject it. Cognitive dissonance theory tells us that someone who rejects a message is likely to evaluate source credibility negatively. Therefore, in this study, if the message differed from the subject's previously held impression of the Air Force, the subject was likely to reject the message (social judgement theory), and then evaluate source credibility negatively (cognitive dissonance theory). This is true particularly regarding food handling, which was more involving than childcare worker training for this sample.

This creates an interesting cycle, because in this study the source (the Air Force) is also the subject of the message. In effect, the results of this study, interpreted in light of social judgment theory and cognitive dissonance theory, seem to indicate that participants evaluated the Air Force as less credible when it had negative news about itself, because a negative message did not agree with the participants' initial general impression of the Air Force as a credible source. This "Catch 22" explanation for the

results is problematic; it is loaded with possible theoretical problems, because the source and the subject of the message are the same entity.

The study design and the stories themselves more likely affected the results of the study. Participants read the stories (positive or negative) on the homepage and then were immediately asked about the Air Force's credibility. Because credibility is a function of expertise and trustworthiness, participants who just finished reading a story about lapses in training or expertise are likely to reflect that impression on survey responses. This is particularly true for the 242 participants (76.8 % of the sample) who had no previous opinion about the Air Force or said they were very unfamiliar with the Air Force. Sternthal, Phillips, and Dholakia (1978) observed, "In situations where the message triggers no initial opinion, individuals will examine behaviors associated with the message to infer their initial opinions" (p. 307). Thus, instead of measuring a response in reaction to seeing a negative story about the Air Force on an Air Force homepage (an unexpected condition), the study may have measured participants' response to the contents of the negative story.

As far as the stories themselves are concerned, Austin and Dong (1994) found that innocuous stories were rated significantly higher on accuracy and truth than ambiguous or sensational stories. The negative stories in this study would clearly be seen as more sensational—or at least less innocuous—than the positive stories. Austin and Dong's results would suggest that the people who read the negative stories would rate those stories as less accurate or less truthful (hence, less credible) than would the people who read the positive stories. In fact, as seen in Figure 1, positive stories were rated as more

credible in this study, no matter on which homepage they were posted. Again, this suggests that participants may have responded more to the story itself than to the source or channel.

Future studies in this area should have each subject read a variety of stories on the Air Force homepage. One condition would include only good news stories about the Air Force, while the other would include a small percentage of negative stories. Not only is this more realistic for the genre, but it would also keep participants from responding to only one story that necessarily represents a single end of the positive/negative spectrum. Being exposed to a variety of stories would minimize the likelihood that participants are responding to a specific story topic and would make it more likely that they are responding to the presence or absence of more balanced (positive and negative) reporting on the part of the Air Force. Additionally, a measure should be included prior to treatment to determine participants' pre-existing attitude toward (not just credibility of) the Air Force or other institution in question. Such a study would shed further light on this hypothesis.

#### Research Question

The research question was designed to indicate whether there are noticeable channel effects on credibility, where the channel is TV or the WWW. Apparently, there are not significant credibility effects introduced by the channel itself, at least for these two channels in this study.

Because the WWW lies somewhere between TV and newspapers when it comes to credibility as a news source (as discussed for Hypothesis Three), the findings of this

study do not necessarily conflict with previous research that suggests a channel effect between newspapers and television. However, this research does suggest that studies that ask people to indicate which particular channel they find most credible may be asking the wrong question. By forcing people to make a choice between which of two media they find most credible, researchers may be obtaining data that are ultimately unrelated to people's news use habits.

A recent Gallup poll (Newport & Saad, 1998) found that while 75 percent of Americans report getting their news from nightly network news, the nightly network news received only a 43 percent positive rating, where the rating is the percent of respondents who say they "can trust" minus the percent that "cannot trust" that channel. Newport & Saad (1998, p. 31) note that nightly network news is "conspicuously missing from the top tier for perceived credibility," although it is the number one source of news for Americans. This contradiction is similar to that found in this study (Hypothesis Two), where people who actually use the WWW for news think Web news is more biased than people who do not use the WWW for news.

Note that for one treatment condition (a positive story about Air Force food service), the results of a MANOVA that included all five scale items approached significance,  $F(5, 75) = 2.24, p < .06$ . Apparently, people who saw this story on the WWW found it more credible than those who saw it on television. The Elaboration Likelihood Model suggests that this supposedly low-involvement topic, particularly when presented without the controversy or conflict suggested in the negative story versions, would prompt participants to more closely evaluate peripheral cues such as credibility.



This increased salience of credibility cues could, in turn, lead to the distinction between a more and less credible channel. However, if this was the case, other low-involvement, low-controversy treatments (the positive story about child care training) should have also produced significant channel differences, but this was not the case. Because this result was not consistent across story topic or story valence (positive or negative), no conclusion can be drawn from this result. Perhaps an expanded study that uses more topics will find some pattern not evident in this study with only four story versions.

For three of the four different stories (all except the negative childcare training story), participants found the WWW treatments significantly less biased than the same stories on TV. This parallels similar findings from previous studies and polls indicating that many people find the WWW to be less biased than traditional media (Newport & Saad, 1998; Brady, 1996).

### Limitations

There were several limitations to this study, some of which were anticipated but could not be avoided, and others that were unanticipated. A discussion of the limitations follows.

### Involvement Scale

The measures of involvement appeared to have good content validity, but the restaurant kitchen cleanliness topic ended up having a higher level of involvement than expected. This is probably due to the wording on the survey, which measured involvement in the topic of restaurant kitchen cleanliness, rather than the topic of Air

Force dining facility food service. This wording was chosen for the survey in order to avoid sensitizing participants to the Air Force as the institution of interest in the study, realizing that the more general wording would probably result in slightly higher measures of involvement.

Therefore, while the results must be interpreted with care, keeping in mind the involvement measure, it is very likely that the topic of Air Force food service is a low involvement topic for this subject sample.

### Organizational Credibility

In hindsight, it would have been advantageous to use a more expanded credibility scale for the post-treatment level of organizational credibility. The five-item scale was used, because it was a specifically a media credibility scale (Meyer, 1988), and the study set out to explore that concept. The scale reliability, while acceptable, was not excellent, like it was for the pre-treatment measure of organizational credibility. Perhaps the results could have been more easily interpreted if a post-treatment scale with higher reliability had been used.

### Communication Model

This study is based on the assumption of a linear model of communication, in which the sender sends a message through a media channel to the receiver. This model is inadequate for the emerging technologies that allow and encourage quick feedback or even—increasingly—interaction with the media source. However, for the limited purposes of this study, the linear model is sufficient.

### Generalizability

A larger concern is with the generalizability of this study, which uses a convenience sample of college students, who have historically been low news users. However, this sample is more likely than a random sample of the entire population to include people familiar with the WWW. The population is young and relatively affluent (characteristics common to Web-users (Pew, 1996)), and the University uses the Web for many student interactions.

The characteristics of this participant pool may affect the results, as previous research has shown that younger, less-educated, and female participants will rate source credibility higher than older, more-educated, or male counterparts (Johnson & Kay, 1998; O'Keefe, 1990). This participant pool consisted primarily of young women, which may have had considerable bearing on results. The results of this study may be generalized only to similar populations. Ideally, future studies should use random samples of the general population in order to make the results more widely generalizable, although such a sample would be difficult to gather without significant monetary inducement.

### Researcher Demand

If people are being observed by an important other, they may be likely to be influenced by appeals to appropriateness or group effectiveness, although the influence of other varies with individual differences (Reardon, 1991). When researchers use self-report measures, "there is always the danger of a respondent telling you what you think you want to hear, or what he or she thinks is a desirable answer" (Stacks & Hocking, 1992, p. 142). This is an important caution about researcher demand, assuming that some

participants may view the researcher as someone they want to please or help, particularly if (as in this case) they are getting extra credit for participating in the study.

### Specific Organizations

As noted earlier in the discussion, it is possible that specific news organizations may have a higher (or lower) perceived credibility with the public than the national news media in general. Specifically, this study compared a pre- test general measure of national news media credibility with a post-test specific measure of Fox News. While Fox News is representative of the national news media category, it is a leap to assume that post-treatment credibility measures of Fox News stories are representative of the perceived credibility of national news media as a whole. Results may have been different if a different representative national news outlet (e.g., CNN, or MSNBC) had been used in the study.

Additionally, the use of a government organization in this study, while convenient and pertinent from the researcher's perspective, added a possible confound to the study, as people have specific preconceptions that affect their perception of government agencies' credibility. In particular, people may have the preconception that government agencies exert influence to bias reporters' stories (Urban & Associates, 1998).

### Study Design

This study focused participants' attention on one specific news story for them to read or view, although the TV stories included a brief lead-in as if they were part of a whole broadcast, and WWW stories were presented as one of a number of stories on the

homepage. However, no other stories were shown on the TV treatments, and no other live links were included on the WWW page. This artificiality was designed to reduce participants' time in taking the study, but detracts from the realism of the experience.

Because the study used a between-groups design, participants rated credibility of both organizations in the pre-treatment survey, but only rated credibility for the one organization that sponsored the Web page they saw in the post-treatment survey. This made it impossible to directly measure correlation between perceived credibility of an organization with perceived credibility of that organization's homepage for any individual.

#### Directions for Future Research

This study picks up where earlier scholarly research left off by including WWW news in the study of media credibility. Private organizations and polling agencies continue to provide data in this area, but should not be relied on as impartial investigators because these organizations often have something to gain by finding that the Web is perceived as a credible news source. Possible directions for future scholarly research on the topic are described below.

#### Replication and Extension

The most important step for future research into the credibility of WWW news is replication of this study. Replication will help rule out anomalies in the results of this study, and can also take steps to improve on the shortcomings of the current study. With respect to previous research in this area, this study has shown that merely asking the same question (e.g., which channel is most credible?) can lead to different answers depending

on who is asked, how they are asked, and when they are asked. Therefore, it is important to study the question using the same methodology in order to reinforce the results of this study.

In order to avoid a possible confound, replications should take care, as this one did, to ensure positive and negative messages have highly similar levels of linguistic diversity, and should collect data to determine the communicator's status (not just credibility) in the mind of participants. This will ensure that results will not be affected by participants' higher expectations for message quality or diversity from a higher status source.

Additionally, because the particular organizations chosen for this study may have introduced the unexpected confounds of a government agency and a news organization, replication of this study should include two non-media, non-government sources to determine whether organizational credibility is correlated with homepage credibility.

Beyond simple replication, and in order to improve on the shortcomings noted above, future studies of Web news credibility should:

1. Have each subject read a variety of stories on an organization's homepage.

One condition should include only good news stories about the organization, while the other should include a small percentage of negative stories. Not only is this more realistic for the genre, but it would also keep participants from responding to a single story that necessarily represents only one end of the positive/negative spectrum. Exposing participants to a variety of stories would minimize the likelihood that they are responding to a specific story

topic. Moreover, multiple stories would make it more likely that participants are responding to the presence or absence of more balanced (positive and negative) reporting on the part of the organization.

2. Use a within-groups design to assess more clearly any relationship between perceived organizational credibility and perceived credibility of news on that organization's homepage.
3. Ensure that pre-treatment and post-treatment measures of credibility assess the same specific organization included in the treatment. This means that even though results may be less general (they will be linked to a specific media organization), they will also be more reliable, because pre- and post-treatment credibility measures can be compared without reservation.
4. Include an additional pre-treatment measure to determine participants' pre-existing attitude toward (not just the perceived credibility of) the organization in question.

#### Other Directions for Study

There has been much research in the source credibility arena that highlights personal properties that make people appear more or less credible. These principles can be fairly easily translated to television news. Similarly, studies about lexical properties associated with higher or lower source credibility can be translated to newspapers and to the WWW. However, with the new ways that the WWW can present information (in a combination of audio and video clips with or without text, on a site that does or does not

include advertising, with or without interactive components such as polls, on Web TV or on a personal computer, etc.), a whole new arena for study opens up.

Future studies should explore specific ways organizations can use WWW-specific techniques to improve the perceived credibility of the news on their sites. Specifics on whether peripheral cues on a homepage can increase the credibility of stories on the site should be the topic of a separate study.

Media credibility research would benefit from further study from a uses and gratifications perspective, to find out exactly what role perceived credibility plays in helping people decide where they will get their news. In particular, such research should be directed at determining which aspects of different channels (TV, WWW, newspapers, or other media of interest) are primary in news consumers' decisions to use a particular channel for news.

### Conclusion

As long as researchers continue to explore credibility and the news, participants will respond to the questions posed in studies that juxtapose credibility and news use, but their answers may be trivial and fail to get at the real reasons people prefer one channel over another when it comes to getting news. Perhaps a better question to ask in understanding how people use news is, "What makes you more likely to use one news outlet over another?"

This is not to say that credibility in news reporting is inconsequential—definitely not. But, despite what newspeople may think should be an intuitive link between media



credibility and media use, this study provides evidence that credibility is only of secondary importance to news users.

The WWW is seen as a credible channel for national news—even more credible than TV in this study, but while people make credibility judgments about the news channels they use, they do not necessarily choose to use or not use a channel based on its perceived credibility. Furthermore, the credibility of a particular organization does not necessarily translate into equivalent or proportional credibility for news on its own Web site; rather, people are likely to find sites associated with journalistic organizations more credible news sources than non-journalistic sites. People are more likely to judge the credibility of news stories on the Web based on characteristics of the story itself, rather than by looking for credibility cues from the Web site or site sponsor.

Additionally, people who use the WWW as a news source do not perceive the WWW to be a more credible source than do people who do not get use news from the Web. This may be an indication that Web users are “sophisticated skeptics,” whose familiarity with Web hoaxes and urban legends makes them think of the Web as a valuable news source, but one to be used with caution.

Finally, the results of this study indicate that a non-media organization should be cautious in posting negative news about itself on its own homepage. This is particularly true if the prospective readers are otherwise unfamiliar with the organization, as the readers may form an opinion of the organization based on what they read on the organization’s homepage.

From a practical standpoint, then, organizations should take advantage of the apparent credibility of news posted on the WWW to disseminate their news. However, organizations should not rely on their organizational reputation or credibility to translate into a similar reputation for news on their homepage. Rather, organizations should ensure that the news as a whole on their Web sites portrays the image and information the organization wants readers to have.

When it comes to disseminating unfavorable news, organizations may be better served by using a journalistic conduit for their information. At the very least, they should make sure that negative news on their own homepage is balanced by good news, so readers unfamiliar with the organization don't form a negative opinion of the organization. In summary, while the WWW represents an important and viable means for organizations to disseminate information, organizations should continue to work with the traditional news media to effectively communicate with the public.

## **APPENDIX A: MOCK NEWS STORIES**

## **CHILD CARE WORKER TRAINING--POSITIVE**

### **Report Lauds Air Force Childcare**

WASHINGTON--A report by the National Center for the Childcare Workforce released Monday lauds Air Force child care centers as some of the best in the nation in terms of staff turnover and staff training.

Staff turnover averaged nearly one third each year at civilian day care centers, but at Air Force bases, the turnover was less than 10 percent. Monday's report said the low turnover is largely due to high employee satisfaction that reflects the Air Force's state-of-the-art training programs.

While across the country many empty child care provider slots are being filled by welfare recipients as states push to empty the welfare rolls, by contrast providers at Air Force bases are highly trained and educated, the report said.

"I've always felt good about dropping my daughter off at the child development center here," said Staff Sgt. Paul Kuffel, who has a three-year-old daughter in day care at McChord AFB, Wash. "The staff is trained to handle any type of emergency, and I'm confident that my daughter is getting proper care. I don't have to worry about her while I'm at work."

The report notes that the Air Force closely monitors training for childcare workers and in most cases provides much more than just the minimum required training.

According to Air Force regulations, beginning childcare providers go through a three-day training course that includes training on basic skills, a half-day of CPR, and also child psychology and conflict management. By contrast, civilian centers typically spend less than half a day on formal training, the report said.

"Since child-care workers are the key to quality, the study begins to make you understand why quality of care at Air Force child care centers remains high," said Sheryl Blankenship, president of the Federal Childcare Action Campaign, a child advocacy group. "If day care centers continue to emphasize worker training, the children will get outstanding care." Blankenship was familiar with the report but did not participate in the research.

A spokesperson for the undersecretary for Air Force Family affairs said Air Force officials are pleased but not surprised at the report's findings.

## **FOOD SERVICE--POSITIVE**

### **GAO Lauds Air Force Dining Facilities**

WASHINGTON--More than 50,000 airmen depend on Air Force dining facilities to feed them every day. And a study released Monday by Congress' investigative agency said the U. S. Air Force is doing an outstanding job of ensuring that food they serve the airmen is safe.

The study was commissioned in February in response to concerns in the civilian community about food safety in the wake of the scare over tainted beef and imported produce. The findings by the General Accounting Office cite the Air Force's stringent quality control of imported foods and conscientious food handling as the reason for their high marks in food safety.

"Our food inspections are thorough and effective, and we strive to meet or exceed every food handling guideline," said Col. Karl Duckworth, who oversees the Air Force's Dining Services program. "We make sure that the food we serve is not only tasty, but 100 percent safe."

The study found that the Air Force's spot inspections of food inventory meant that almost five percent of food served at Air Force dining facilities was checked by full-time inspectors. Inspections regularly include a laboratory analysis for disease-causing organisms or other problems. Additionally, food service professionals at Air Force bases have to complete a six-week course before becoming fully qualified to prepare and serve food.

The GAO report said that Air Force food inspectors carried out 100 percent of their planned inspections and laboratory analyses on imported foods in 1996 and 1997, a record far exceeding that of their civilian counterparts.

"As an airman, I have to eat at the chow hall every day, and I've always thought the food was pretty good," said Senior Airman Renee Hearrell, an aircraft mechanic at Grand Forks AFB, N.D. "It's nice to know that at the chow hall we don't have to worry about e coli and all that other stuff you can get at fast food restaurants." Single airmen who live on base are given meal cards to eat at the dining facilities, since their pay does not include the cost of food.

An Air Force spokesman said that the Air Force was very pleased with the report, since it has always made the wellbeing of its personnel a priority, and this is just one more example of how it's doing that.

## **CHILD CARE WORKER TRAINING--NEGATIVE**

### **Report Blasts Air Force Childcare**

WASHINGTON--A report by the National Center for the Childcare Workforce released Monday cites Air Force child care centers as some of the worst in the nation in terms of staff turnover and lack of staff training. Child care centers for the other military services fared slightly better.

Staff turnover averaged nearly one third each year at civilian day care centers, but at Air Force bases, the turnover was closer to half. Monday's report said the higher turnover is largely due to employee dissatisfaction with outdated training programs that have remained stagnant for almost a decade.

Due to the higher than average turnover at Air Force child care centers, many empty slots are now being filled by welfare recipients as states push to empty the welfare rolls. Nationwide, 35 percent of centers now employ welfare recipients, but 74 percent of Air Force day care centers employ welfare recipients.

"I don't have anything against people on welfare, but I'm not sure that they're getting enough training," said Staff Sgt. Paul Kuffel, who has a three-year-old daughter in day care at McChord AFB, Wash. "Our babysitter probably has as much or more experience than some of the employees at the base day care center. I'm not confident that my daughter is getting proper care, and that bothers me." Kuffel said he was appalled but not surprised at the report's findings.

The report focuses on questions about the qualifications of the Air Force's child-care workers, noting that more than one third of the workers received only the minimum required training.

According to Air Force regulations, beginning childcare providers go through a four-hour training course that includes training on basic skills such as feeding and diaper-changing and a half-hour overview of CPR. By contrast, Air Force regulations require lifeguards at the base pools to complete a two-day course that includes basic water safety and a full day of CPR certification.

"Since child-care workers are the key to quality, the study begins to make you understand why quality of care at Air Force child care centers is apparently so low," said Sheryl Blankenship, president of the Federal Childcare Action Campaign, a child advocacy group. "If day care centers don't train workers adequately, they simply won't get adequate child care." Blankenship was familiar with the report but did not participate in the research.

A spokesperson for the undersecretary for Air Force Family affairs said Air Force officials are still evaluating the report.

## **FOOD SERVICE--NEGATIVE**

### **GAO Blasts Air Force Dining Facilities**

WASHINGTON--More than 50,000 airmen depend on Air Force dining facilities to feed them every day. But a study released Monday by Congress' investigative agency said the U. S. Air Force is unable to ensure that food they serve the airmen is safe.

The study was commissioned in February in response to a rash of incidents of food poisoning reported at base hospitals. In the past year, there have been more than 30 cases of food poisoning reported at Air Force bases nationwide, although no one has died in any of the incidents. The findings by the General Accounting Office cite the Air Force's inadequate quality control of imported foods and improper food handling as the reason for their failing marks in food safety.

"We conduct food inspections according to our food handling regulations," said Col. Karl Duckworth, who oversees the Air Force's Dining Services program. "It's not possible to inspect each and every piece of food, but we do inspect a representative sample, much like the FDA does for civilian agencies. We're very careful about following food handling regulations."

The study found that the Air Force's spot inspections of food inventory meant that only 1.7 percent of food served at Air Force dining facilities was actually checked by full-time inspectors. Of those inspections, only 127 included a laboratory analysis for disease-causing organisms or other problems.

The GAO report said that Air Force food inspectors carried out less than half of their planned inspections and about 65 percent of their planned laboratory analyses on imported foods in 1996 and 1997. The Air Force said these plans are only projections and that inspectors often are called upon to do emergency work that leaves routine tasks undone.

"As an airman, I have to eat at the chow hall every day, and I've got to be able to trust that the food is safe," said Senior Airman Renee Hearrell, an aircraft mechanic at Grand Forks AFB, N.D. "I've never gotten sick from the food, but I don't want to have to worry about E coli every time I pick up a burger." Single airmen who live on base are given meal cards to eat at the dining facilities, since their pay does not include the cost of food.

An Air Force spokesman said that the Air Force has always made the wellbeing of its personnel a priority, and that the Air Force is still evaluating the report.

## **APPENDIX B: CONSENT AND DEBRIEFING FORMS**



### Consent Form

The purpose of this research project is to learn more about the way people use news. You are being asked to complete a two-part survey and view a television news story or use a World Wide Web site. The survey will include a variety of scales and some demographic questions.

No attempt will be made to identify you through your responses to the questions and scales; please do not make any identifying marks on your response packet. Approximately 300 people will take part in this study.

Participating in this study will take approximately 15-20 minutes of your time today and approximately 20-25 minutes on the day you return for the second half. You must complete both parts to receive extra credit. No partial credit is given for completing only one part of the study. An alternative extra credit project is available for people who choose not to participate in the study or for those who withdraw from the study.

Signing this form also acknowledges that you realize you may withdraw from participating in this project without penalty, either today or during the second session in which you participate. You will be given a copy of this form for your own records.

If you have any questions about this study, please feel free to contact the researcher, Linda Pepin, at (302) 698-1280 or Dr. John Courtright, Chairman of the Communication Department at (302) 831-8041. If you have questions about subjects' rights in research, please contact Dr. Costel Denson, Vice Provost for Research, at (302) 831-2136.

Thank you for participating!

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Name (Please print): \_\_\_\_\_

**Optional:** *If you would like to receive an e-mail copy of a synopsis of the results of this study (available near the end of the Spring 1999 semester), please write your e-mail address here:*

\_\_\_\_\_

### **Debriefing Statement**

The study you have just participated in was designed to compare the credibility of different online and television news sources.

The stories you saw were not actual news stories. They were designed to look like real news stories, but they have no basis in fact. None of the stories or events they describe actually happened. Some people in the study saw World Wide Web sites, while others saw a television news clip. These stories were made to appear as if they had been reported either by the Air Force or by a television news station. The Web sites you saw are actually exist, but the specific stories you read were NOT actually posted on the Web sites you viewed. For those of you who saw a television version, while there really is a Fox News Channel, this newscast was never aired, and was in fact recorded by professional Air Force newscasters for the purposes of this experiment.

This was not done in an effort to mislead you about facts, but the study design required close controls of topics and wording of stories, and therefore could not use actual stories.

Each of you has received a handout that contains factual information on the topic you just saw. Additionally, the handout contains the address for the Fox News and Air Force Web sites, for those of you who would like to see the WWW pages this study was modeled after.

If you're interested in further detail on the study or its findings, please be sure to give the researcher your e-mail address, and a synopsis of results will be forwarded to you after the data has been compiled, probably in the Spring 1999 semester.

Your responses on the survey are anonymous and confidential.

Again, thank you for participating in this study. Your responses will help us understand credibility as it relates to news stories. In order to protect the integrity of the study, it's very important that you do not discuss the study with your friends or classmates until the end of the semester when the study will be completed.

**Your signature below acknowledges that you have read the statement above, and have been given an opportunity to have any questions answered. Your signature also indicates that you agree not to disclose what you have seen or the scales you completed until after the Fall 1998 semester. You will be given a copy of this form for your records.**

I have read and agree to abide by the wishes of the research director.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Printed name: \_\_\_\_\_

## U.S. Air Force



### Child Development Centers

- ❖ The U.S. Air Force makes child development centers available on most bases to care for the children of Air Force members. These centers conduct development programs, rather than simply providing day care.
- ❖ Each facility provides an adequate number of adults to protect the health and safety of children and implement the developmental program.
- ❖ Staff members have the qualifications and training required to protect the health and safety of children and provide a program of developmentally appropriate activities.
- ❖ Each program implements developmentally appropriate activities to promote social, emotional, cognitive, and physical development of children.
- ❖ Parents are given opportunities to be actively involved and staff and parents talk about the program and the care of the children.
- ❖ Staff members interact with children to promote their well-being and development.
- ❖ Sufficient resources are available and efficiently managed to provide a program which protects the health and safety of children and promotes development.
- ❖ The facilities are maintained and the program is operated in such a way as to protect the safety of the children.

***More information on the U.S. Air Force is available at <http://www.af.mil>***

***More information on Fox Television News is available at [www.foxnews.com](http://www.foxnews.com).***

If you have questions about the study or about the information presented in the study, please contact  
Linda Pepin at [thepepins@erols.com](mailto:thepepins@erols.com)

## U.S. Air Force Food Handling Safety



- ❖ Air Force food service personnel are trained in proper food handling by public health professionals with a medical degree.
- ❖ Air Force food service professionals abide by rules of food safety as directed by the 1997 FDA Food Code, plus several more stringent Air Force guidelines.
- ❖ Food service professionals inspect dining facilities daily, in addition to periodic inspections by public health officials. A formal inspection of the facility is documented once a week.
- ❖ Food temperatures are taken every 30 minutes of all food being served to make sure hot foods remain hot and cold foods remain cold.
- ❖ Food is thawed slowly in refrigerators to ensure food isn't at dangerous temperatures.
- ❖ The number of food-related illnesses is tracked at each base, but includes illnesses that are treated on base that are due to eating at off-base facilities.
- ❖ Public health officials conduct intense spot checks of all food coming onto the installation for the dining facilities.
- ❖ In addition to the other routine food inspections, public health officials periodically conduct a formal inspection, usually monthly or quarterly. All inspections are unannounced.

***More information on the U.S. Air Force is available at <http://www.af.mil>***

***More information on Fox Television News is available at [www.foxnews.com](http://www.foxnews.com).***

If you have questions about the study or about the information presented in the study, please contact  
Linda Pepin at [thepepins@erols.com](mailto:thepepins@erols.com)

## APPENDIX C: SURVEY

## SURVEY

# \_\_\_\_\_

*Please write a **four-digit number of your choosing** in the space provided in the upper right corner of this page. You will need to remember this number when you return for the second part of this study (in a week or more), so please make sure it is a number you will remember. This will allow the researcher to match the first and second part of your responses while retaining your anonymity.*

*Please respond to survey items by circling the number that corresponds to your answer. It is important that you respond to each item. After you complete this portion of the survey, please hand it in to the research assistant and make arrangements to return for the second part of the study. If you have a question, please ask the research assistant.*

### PART 1

1. Do you have a computer where you live now?    [1] Yes            [2] No
2. Do you have a television where you live now?    [1] Yes            [2] No
3. When it comes to national news, which of the following statements best describes you? (Circle only one.)
  - [1] I always know what the major stories are and the background of the stories
  - [2] I usually know the major stories but none of the background
  - [3] I know mostly what's in the headlines
  - [4] I usually don't know what the latest stories are
  - [5] I never know what is happening in national news.

Please circle the point on each of the following scales that reflects your *general impression* of **national news coverage on television**.

4. Unfair [1] [2] [3] [4] [5] [6] [7] Fair
5. Unbiased [1] [2] [3] [4] [5] [6] [7] Biased
6. Doesn't tell the whole story [1] [2] [3] [4] [5] [6] [7] Tells the whole story
7. Inaccurate [1] [2] [3] [4] [5] [6] [7] Accurate
8. Can be trusted [1] [2] [3] [4] [5] [6] [7] Cannot be trusted

Please indicate the point on the following scales that reflects your general impression of **national news coverage on the World Wide Web.**

- 9. Accurate [1] [2] [3] [4] [5] [6] [7] Inaccurate
- 10. Fair [1] [2] [3] [4] [5] [6] [7] Unfair
- 11. Tells the whole story [1] [2] [3] [4] [5] [6] [7] Doesn't tell the whole story
- 12. Biased [1] [2] [3] [4] [5] [6] [7] Unbiased
- 13. Cannot be trusted [1] [2] [3] [4] [5] [6] [7] Can be trusted

Please indicate the point on the following scales that reflects your general impression of **national news coverage in newspapers.**

- 14. Tells the whole story [1] [2] [3] [4] [5] [6] [7] Doesn't tell the whole story
- 15. Fair [1] [2] [3] [4] [5] [6] [7] Unfair
- 16. Biased [1] [2] [3] [4] [5] [6] [7] Unbiased
- 17. Cannot be trusted [1] [2] [3] [4] [5] [6] [7] Can be trusted
- 18. Accurate [1] [2] [3] [4] [5] [6] [7] Inaccurate

How much do you think the following issues directly affect you on a day-to-day basis?

- 25. **Motor vehicle safety:** Not at all [1] [2] [3] [4] [5] [6] [7] Very much
- 26. **Post-traumatic stress disorder:**  
Not at all [1] [2] [3] [4] [5] [6] [7] Very much
- 27. **Restaurant kitchen cleanliness:**  
Not at all [1] [2] [3] [4] [5] [6] [7] Very much
- 28. **Childcare worker training:**  
Not at all [1] [2] [3] [4] [5] [6] [7] Very much
- 29. **Binge-drinking:** Not at all [1] [2] [3] [4] [5] [6] [7] Very much
- 30. **Childhood vaccination**  
Not at all [1] [2] [3] [4] [5] [6] [7] Very much

How personally involved do you feel toward the issue of . . .

31. **Motor vehicle safety:** Not at all [1] [2] [3] [4] [5] [6] [7] Very much

32. **Post-traumatic stress disorder:**

Not at all [1] [2] [3] [4] [5] [6] [7] Very much

33. **Restaurant kitchen cleanliness:**

Not at all [1] [2] [3] [4] [5] [6] [7] Very much

34. **Childcare worker training:**

Not at all [1] [2] [3] [4] [5] [6] [7] Very much

35. **Binge-drinking:** Not at all [1] [2] [3] [4] [5] [6] [7] Very much

36. **Childhood vaccination**

Not at all [1] [2] [3] [4] [5] [6] [7] Very much

37. How familiar would you say you are with the **Delaware State Police?**

Not at all familiar [1] [2] [3] [4] [5] [6] [7] Very familiar

In general, do you feel that the Delaware State Police are:

38. Unfair [1] [2] [3] [4] [5] [6] [7] Fair

39. Knowledgeable [1] [2] [3] [4] [5] [6] [7] Unknowledgeable

40. Unqualified [1] [2] [3] [4] [5] [6] [7] Qualified

41. Open-minded [1] [2] [3] [4] [5] [6] [7] Close-minded

42. Untrained [1] [2] [3] [4] [5] [6] [7] Trained

43. Expert [1] [2] [3] [4] [5] [6] [7] Not expert

44. Trustworthy [1] [2] [3] [4] [5] [6] [7] Untrustworthy

45. Is concerned with

the public

[1] [2] [3] [4] [5] [6] [7]

Isn't concerned with

the public

46. Watches after

people's interests

[1] [2] [3] [4] [5] [6] [7]

Doesn't watch after

people's interests

47. Is concerned about the nation's or community's well-being [1] [2] [3] [4] [5] [6] [7] Isn't concerned about the nation's or community's well-being

48. What is the basis for your opinion of the Delaware State Police? (You may mark more than one.)

- [1] Personal experience  
[2] News media sources  
[3] Friends or other personal contacts  
[4] Advertising  
[5] Other (specify) \_\_\_\_\_

49. How familiar would you say you are with the **U.S. Air Force**?

Not at all familiar [1] [2] [3] [4] [5] [6] [7] Very familiar

**In general, do you feel that the U.S. Air Force is:**

50. Unfair [1] [2] [3] [4] [5] [6] [7] Fair

51. Knowledgeable [1] [2] [3] [4] [5] [6] [7] Unknowledgeable

**52. Unqualified [1] [2] [3] [4] [5] [6] [7] Qualified**

53. Open-minded [1] [2] [3] [4] [5] [6] [7] Close-minded

54. Untrained [1] [2] [3] [4] [5] [6] [7] Trained

55. Expert [1] [2] [3] [4] [5] [6] [7] Not expert

56. Trustworthy [1] [2] [3] [4] [5] [6] [7] Untrustworthy

57. Is concerned with the public [1] [2] [3] [4] [5] [6] [7] Isn't concerned with the public

58. Watches after people's interests [1] [2] [3] [4] [5] [6] [7] Doesn't watch after people's interests

59. Is concerned about the nation's or community's well-being [1] [2] [3] [4] [5] [6] [7] Isn't concerned about the nation's or community's well-being



60. What is the basis for your opinion of the U.S. Air Force? (You may mark more than one.)

- [1] Personal experience
- [2] News media sources
- [3] Friends or other personal contacts
- [4] Advertising
- [5] Other (specify) \_\_\_\_\_

61. How familiar would you say you are with **national television news organizations**?

Not at all familiar [1] [2] [3] [4] [5] [6] [7] Very familiar

In general, do you feel that national television news organizations are:

62. Competent [1] [2] [3] [4] [5] [6] [7] Incompetent

63. Dishonest [1] [2] [3] [4] [5] [6] [7] Honest

64. Inexperienced [1] [2] [3] [4] [5] [6] [7] Experienced

65. Just [1] [2] [3] [4] [5] [6] [7] Unjust

66. Skilled [1] [2] [3] [4] [5] [6] [7] Unskilled

67. Selfish [1] [2] [3] [4] [5] [6] [7] Unselfish

68. Informed [1] [2] [3] [4] [5] [6] [7] Uninformed

69. Is concerned with the public [1] [2] [3] [4] [5] [6] [7] Isn't concerned with the public

70. Watches after people's interests [1] [2] [3] [4] [5] [6] [7] Doesn't watch after people's interests

71. Is concerned about the nation's or community's well-being [1] [2] [3] [4] [5] [6] [7] Isn't concerned about the nation's or community's well-being

72. What is the basis for your opinion of national television news organizations? (You may mark more than one.)

- [1] Personal experience
- [2] News media sources
- [3] Friends or other personal contacts
- [4] Advertising
- [5] Other (specify) \_\_\_\_\_

73. How familiar would you say you are with the **Internal Revenue Service (I. R. S.)**?

Not at all familiar [1] [2] [3] [4] [5] [6] [7] Very familiar

In general, do you feel that the I. R. S. is:

74. Competent [1] [2] [3] [4] [5] [6] [7] Incompetent

75. Dishonest [1] [2] [3] [4] [5] [6] [7] Honest

76. Inexperienced [1] [2] [3] [4] [5] [6] [7] Experienced

77. Just [1] [2] [3] [4] [5] [6] [7] Unjust

78. Skilled [1] [2] [3] [4] [5] [6] [7] Unskilled

79. Selfish [1] [2] [3] [4] [5] [6] [7] Unselfish

80. Informed [1] [2] [3] [4] [5] [6] [7] Uninformed

81. Is concerned with the public [1] [2] [3] [4] [5] [6] [7] Isn't concerned with the public

82. Watches after people's interests [1] [2] [3] [4] [5] [6] [7] Doesn't watch after people's interests

83. Is concerned about the nation's or community's well-being [1] [2] [3] [4] [5] [6] [7] Isn't concerned about the nation's or community's well-being

84. What is the basis for your opinion of the I. R. S.? (You may mark more than one.)

[1] Personal experience

[2] News media sources

[3] Friends or other personal contacts

[4] Advertising

[5] Other (specify) \_\_\_\_\_

85. If you were getting information about the Air Force directly from the Air Force, would you expect the information to be (choose one):

- [1] Very negative about the Air Force
- [2] Slightly negative about the Air Force
- [3] Unbiased
- [4] Slightly positive about the Air Force
- [5] Very positive about the Air Force

86. If you were getting information about the Delaware State Police directly from the Delaware State Police, would you expect the information to be (choose one):

- [1] Very negative about the Delaware State Police
- [2] Slightly negative about the Delaware State Police
- [3] Unbiased
- [4] Slightly positive about the Delaware State Police
- [5] Very positive about the Delaware State Police

87. If you were getting information about the national news media directly from the national news media, would you expect the information to be (choose one):

- [1] Very negative about the national news media
- [2] Slightly negative about the national news media
- [3] Unbiased
- [4] Slightly positive about the national news media
- [5] Very positive about the national news media

88. If you were getting information about the IRS directly from the IRS, would you expect the information to be (choose one):

- [1] Very negative about the IRS
- [2] Slightly negative about the IRS
- [3] Unbiased
- [4] Slightly positive about the IRS
- [5] Very positive about the IRS

89. If you were getting information about the Delaware State Police directly from the national news media, would you expect the information to be (choose one):

- [1] Very negative about the Delaware State Police
- [2] Slightly negative about the Delaware State Police
- [3] Unbiased
- [4] Slightly positive about the Delaware State Police
- [5] Very positive about the Delaware State Police

90. If you were getting information about the Air Force directly from the national news media, would you expect the information to be (choose one):

- [1] Very negative about the Air Force
- [2] Slightly negative about the Air Force
- [3] Unbiased
- [4] Slightly positive about the Air Force
- [5] Very positive about the Air Force

91. If you were getting information about the IRS directly from the national news media, would you expect the information to be (choose one):

- [1] Very negative about the IRS
- [2] Slightly negative about the IRS
- [3] Unbiased
- [4] Slightly positive about the IRS
- [5] Very positive about the IRS

*Please tell us a little about yourself:*

92. 1. Are you:            [1] Female    [2] Male

93. 2. Age: \_\_\_\_\_

94. What year are you in college?

- [1] Freshman
- [2] Sophomore
- [3] Junior
- [4] Senior

95. Major: \_\_\_\_\_

*Please respond to survey items by circling the number that corresponds to your answer. It is important that you respond to each item. After you complete this portion of the survey, please hand it in to the research assistant and return to your seat until you have been dismissed. If you have a question, please ask the research assistant. The consent form you signed for the first half of this study applies to the second half also.*

## PART 2

Think about the story you just saw/read. Do you think the story was:

1. Fair [1] [2] [3] [4] [5] [6] [7] Unfair
2. Biased [1] [2] [3] [4] [5] [6] [7] Unbiased
3. Tells the whole story [1] [2] [3] [4] [5] [6] [7] Doesn't tell the whole story
4. Accurate [1] [2] [3] [4] [5] [6] [7] Inaccurate
5. Cannot be trusted [1] [2] [3] [4] [5] [6] [7] Can be trusted

Based on what you read or saw, do you think the Air Force [or the FOX news channel] as a whole is:

6. Fair [1] [2] [3] [4] [5] [6] [7] Unfair
7. Biased [1] [2] [3] [4] [5] [6] [7] Unbiased
8. Tells the whole story [1] [2] [3] [4] [5] [6] [7] Doesn't tell the whole story
9. Accurate [1] [2] [3] [4] [5] [6] [7] Inaccurate
10. Cannot be trusted [1] [2] [3] [4] [5] [6] [7] Can be trusted

The following questions pertain to where you get your **national news**.

11. How many days in the last seven did you read a newspaper?  

[7] seven (every day)	[6] six	[5] five	[4] four
[3] three	[2] two	[1] one	[0] none

12. How many days during the past week did you watch national news on television?

- |                       |         |          |          |
|-----------------------|---------|----------|----------|
| [7] seven (every day) | [6] six | [5] five | [4] four |
| [3] three             | [2] two | [1] one  | [0] none |

13. How many days in the last seven did you read a news magazine?

- |                       |         |          |          |
|-----------------------|---------|----------|----------|
| [7] Seven (every day) | [6] six | [5] five | [4] four |
| [3] three             | [2] two | [1] one  | [0] none |

14. How many days during the past week did you listen to national news on the radio?

- |                       |         |          |          |
|-----------------------|---------|----------|----------|
| [7] seven (every day) | [6] six | [5] five | [4] four |
| [3] three             | [2] two | [1] one  | [0] none |

15. How many days during the past week did you visit a World Wide Web site to get national news?

- |                       |           |
|-----------------------|-----------|
| [7] seven (every day) | [3] three |
| [6] six               | [2] two   |
| [5] five              | [1] one   |
| [4] four              | [0] none  |

How long did you spend using the following sources to get national news **yesterday**?  
(Fill in the blank for any news sources you used yesterday. You may mark more than one. Write "0" in the blank for sources you did not use at all yesterday.)

16. Magazines: \_\_\_\_\_ minutes

17. Television: \_\_\_\_\_ minutes

18. Newspapers: \_\_\_\_\_ minutes

19. World Wide Web: \_\_\_\_\_ minutes

20. Radio: \_\_\_\_\_ minutes

21. Personal contacts (friends, teachers, etc.): \_\_\_\_\_ minutes

22. How often do you use the World Wide Web? (Circle one)

- [1] Twice or more a day
- [2] About once a day
- [3] Twice or more a week
- [4] About once a week
- [5] Twice or more a month
- [6] About once a month
- [7] Less than once a month
- [8] Never (**Go to question 24** if you mark this response)

23. Why do you use the World Wide Web? (Circle all that apply)

- [1] To relax
- [2] To be entertained
- [3] To forget about work and other things
- [4] To pass the time away, particularly when I'm bored
- [5] To feel excited
- [6] To feel less lonely
- [7] To satisfy a habit
- [8] To do research for school
- [9] To get news and information (unrelated to school)
- [10] Other: \_\_\_\_\_

**\*Skip to question 25.\***

24. What are the reasons you don't use the World Wide Web? (Circle all that apply)

- [1] Too hard to access
- [2] Not enough time
- [3] Don't know how
- [4] Just not interested
- [5] Not good with computers
- [6] Other \_\_\_\_\_

25. How many minutes long is your average visit to one **news** web site? (Fill in the blank.)

\_\_\_\_\_ minutes (Answer 0 if you don't use the World Wide Web for news, and skip to question 119.)

26. Which types of **World Wide Web news sites** do you visit regularly? Sites sponsored by: (Circle all that apply.)

- [1] National newspapers (e.g. USA Today, New York Times, Washington Post)
- [2] Network television (e.g., ABC, CBS, NBC)
- [3] Cable television (e.g. CNN, CNBC)
- [4] Local newspapers
- [5] National magazines (e.g. Time, Newsweek)
- [6] Radio
- [7] Other (Specify) \_\_\_\_\_

26. If you do not use the WWW to gather news, what are your reasons? (Circle all that apply)

- [1] Not enough time
- [2] Not interested in news from any source
- [3] Not good with computers
- [4] Get enough news from other sources
- [5] Didn't know news was available on the World Wide Web
- [6] Getting on the World Wide Web is too much trouble
- [7] Other \_\_\_\_\_

*Finally, we need some demographic information from you.*

27. 1. Are you: [1] Female [2] Male

28. 2. Age: \_\_\_\_\_

29. What year are you in college?

[1] Freshman [2] Sophomore [3] Junior [4] Senior

31. Major: \_\_\_\_\_

32. Ethnic group: [1] African-American [2] Asian [3] Caucasian [4] Hispanic  
[5] Native American [6] Other \_\_\_\_\_(please specify)

33. What's your best estimate of your family's annual income?

- |                          |                            |
|--------------------------|----------------------------|
| [1] Less than \$25,000   | [5] \$70,001 to \$85,000   |
| [2] \$25,001 to \$40,000 | [6] \$85,001 to \$100,000  |
| [3] \$40,001 to \$55,000 | [7] \$100,001 to \$150,000 |
| [4] \$55,001 to \$70,000 | [8] More than \$150,000    |

Thank you for completing the survey. Please hand in your survey and return to your seat until the research assistant dismisses you.



## **APPENDIX D: WORLD WIDE WEB HOMEPAGE TREATMENTS**



## Air Force Link



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Spotlight



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Careers



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Sites



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- [DefenseLINK News -- Defense Department news releases \(daily\)](#)
- [Electronic Earlybird -- Defense-related news in PDF format \(.mil only\)](#)

• [Major Command News:](#)

- [Air Combat Command](#)
- [Air Education and Training Command](#)
- [Air Force Materiel Command](#)
- [Air Mobility Command](#)
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- [Air Force Personnel Center](#)
- [Air Force Reserve](#)
- [Air National Guard](#)
- [US Air Forces in Europe](#)
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## Current News...

08/06/98: [McCloud buried in Arlington National Cemetery](#)

...  
 08/06/98: [Air Force staff sergeant killed](#)

KELLY AIR FORCE BASE, Texas (AFNS) -- Air Force Staff Sgt. Raul A. Marin II, 29, was found dead in his home early Aug. 6. The Indiana native was found in his northeast San Antonio home after he was m...

08/06/98: [Report lauds Air Force childcare](#)

WASHINGTON (AFNS) -- A report by the National Center for the Childcare Workforce released Monday lauds Air Force child care centers as some of the best in the nation in terms of staff turnover and staff training...

08/06/98: [Aviator continuation pay clears hurdle](#)

WASHINGTON (AFNS) -- Next fiscal year's aviator continuation pay has moved a step closer to reality with the approval of the assistant secretary and the chief of staff of the Air Force. The program s...

08/06/98: [Joint effort gets humanitarian goods to Guatemala](#)

ROBINS AIR FORCE BASE, Ga. (AFNS) -- Three reserve component units and a civilian humanitarian relief organization joined forces to deliver 30 pallets of donated medical and educational supplies to Gu...

08/06/98: [Kazakhstani officers gain insight into U.S. airlift operations](#)

DOVER AIR FORCE BASE, Del. (AFNS) -- A group of Kazakhstani transport pilots and navigators visited here July 27-31 to gain a broader understanding of U.S. airlift operations. U.S. Atlantic Command, ...

08/06/98: [Air Force shooters 'hit the mark' at National Pistol Championships](#)

RANDOLPH AIR FORCE BASE, Texas (AFNS) -- The National Rifle Association and the Civilian Marksmanship Association recently conducted their annual matches at Camp Perry, Ohio. More than 700 accomplishe...

08/06/98: [Dover honor guard posts colors at exhibit opening](#)

...  
 08/06/98: [Seymour Johnson, Incirlik win 1998 Air Force Innkeeper awards](#)

RANDOLPH AIR FORCE BASE, Texas (AFNS) -- Seymour Johnson Air Force Base, N.C. and Incirlik Air Base, Turkey, are the 1998 Air Force Innkeeper Award winners. Since 1981, the Air Force annually recogni...

08/06/98: [Air Force readies itself for 21st century](#)










WASHINGTON -- Calling it "the next logical step" to support the warfighter and enhance the quality of life for all airmen, Air Force leaders

- 
- Other News Servers
  - DoD, Federal
  - Government and related
  - news sources
  - Retiree News – The
  - latest news for the Air
  - Force Retiree
  - Community
  - Voice of America
  - Newswires – Overseas
  - news (daily)
- 

**Archive:**

- Air Force Response
- to Iraq
- Generations, One
- Prayer
- Star Trek, The Next
- Generation
- Saudi Relocation
- Desert Strike
- 1997 Airmen of the
- Year

unveiled details Aug. 4 for the expeditionary aerospace for...

08/05/98: New program helps veterans find medical records  
 08/05/98: Now showing: Aug. 10 edition of Air Force Television News  
 08/05/98: Air Force announces fiscal 1999 force-shaping program  
 08/05/98: Assignment system changes for new pilots  
 08/05/98: AMC awards estimated \$567 million in airlift contracts  
 08/05/98: TACAMO 'first' enhances Strategic Command deterrence mission  
 08/05/98: Advanced Medium Range Air-to-Air Missile tests new vehicle at  
Eglin  
 08/05/98: McGuire troop named 'First Term Airman of the Year'  
 08/04/98:  Robertson takes reins of U.S. Transportation Command, AMC  
 08/04/98:  Gamble takes command of Pacific Air Forces  
 08/04/98: Chief of National Guard Bureau retires  
 08/04/98:  State-of-the-art C-130H2 flight trainer opens at Dobbins  
 08/04/98:  F-117 testers evaluate real-time information capability  
 08/04/98:  Raptor completes first air refueling at Edwards AFB  
 08/04/98: Nonconcurrent travel policy impacts Incirlik  
 08/04/98: Civilian development program seeks nominees  
 08/04/98: Staff sergeant promotion rate highest in 27 years  
 08/03/98: Keesler kickboxer wins fourth world title belt  
 08/03/98:  RED HORSE unit aids in base improvement  
 08/03/98: Military youth write essays, win savings bonds  
 08/03/98: RIMPAC brings more expeditionary airpower to the Pacific  
 08/03/98: Edwards airman dies in rafting accident  
 08/03/98: Incoming family members not allowed at Incirlik  
 08/03/98:  Cohesion key to Tazár air transportation success  
 08/03/98: Civil Air Patrol revives coastal patrol tradition  
 08/03/98: Air Force seeks physician assistants  
 08/03/98: Air Force launches into expeditionary mission  
 07/31/98:  Veteran airman killed in Capitol shooting is buried at Arlington  
 07/31/98: People First: Providing up-to-date information about military  
installations  
 07/31/98: DOD reaffirms human goals afforded to all  
 07/31/98: Air Force members play vital role in election process  
 07/31/98: Proving ground tests DOD's digital dog tags  
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## Air Force News

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Released: 6 Aug 1998

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While across the country many empty child care provider slots are being filled by welfare recipients as states push to empty the welfare rolls, by contrast providers at Air Force bases are highly trained and educated, the report said.

"I've always felt good about dropping my daughter off at the child development center here," said Staff Sgt. Paul Kuffel, who has a three-year-old daughter in day care at McChord AFB, Wash. "The staff is trained to handle any type of emergency, and I'm confident that my daughter is getting proper care. I don't have to worry about her while I'm at work."

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"Since child-care workers are the key to quality, the study begins to make you understand why quality of care at Air Force child care centers remains high," said Sheryl Blankenship, president of the Federal Childcare Action Campaign, a child advocacy group. "If day care centers continue to emphasize worker training, the children will get outstanding care." Blankenship was familiar with the report but did not participate in the research.

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#### RELATED SITES

- \* [General Accounting Office](#)
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"I don't have anything against people on welfare, but I'm not sure that they're getting enough training," said Staff Sgt. Paul Kuffel, who has a three-year-old daughter in day care at McChord AFB, Wash. "Our babysitter probably has as much or more experience than some of the employees at the base day care center. I'm not confident that my daughter is getting proper care, and that bothers me." Kuffel said he was appalled but not surprised at the report's findings.

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"Our food inspections are thorough and effective, and we strive to meet or exceed every food handling guideline," said Col. Karl Duckworth, who oversees the Air Force's Dining Services program. "We make sure that the food we serve is not only tasty, but 100 percent safe."

The study found that the Air Force's spot inspections of food inventory meant that almost five percent of food served at Air Force dining facilities was checked by full-time inspectors. Inspections regularly include a laboratory analysis for disease-causing organisms or other problems. Additionally, food service professionals at Air Force bases have to complete a six-week course before becoming fully qualified to prepare and serve food.

The GAO report said that Air Force food inspectors carried out 100 percent of their planned inspections and laboratory analyses on imported foods in 1996 and 1997, a record far exceeding that of their civilian counterparts.

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An Air Force spokesman said that the Air Force was very pleased with the report, since it has always made the wellbeing of its personnel a priority, and this is just one more example of how it's doing that.

### RELATED SITES

- \* [General Accounting Office](#)
- \* [Grand Forks Air Force Base, ND](#)





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## APPENDIX E: SCRIPTS FOR TELEVISION TREATMENTS

## **GOOD CHILD CARE STORY**

**ANCHOR:** A REPORT BY THE NATIONAL CENTER FOR THE CHILD CARE WORKFORCE SAYS AIR FORCE CHILD CARE CENTERS ARE SOME OF THE BEST IN TERMS OF STAFF TURNOVER AND TRAINING. KEVIN OHLSON HAS MORE ON THE STORY.

**OHLSON:** AIR FORCE CHILDCARE CENTERS NOW HAVE THE DISTINCTION OF BEING THE BEST IN THE NATION. DUE TO A RECENT REPORT RELEASED BY THE NATIONAL CENTER FOR THE CHILD CARE WORKFORCE ... STAFF TURNOVER AND TRAINING IS WHAT EARNED THIS DISTINCTION. NATIONWIDE TURNOVER RATES AVERAGED ONE THIRD EACH YEAR, BUT FOR THE AIR FORCE, ITS RATE WAS LESS THAN 10-PERCENT. THE REPORT CITED THE LOW RATES A RESULT OF EMPLOYEE SATISFACTION DUE TO AIR FORCE STATE-OF-THE-ART TRAINING. A NATIONWIDE PROBLEM FOR EMPTY CHILDCARE SLOTS, WAS A TREND TO FILL VACANT EMPLOYEE POSITIONS WITH WELFARE RECIPIENTS ... NOT FOCUSING ON TRAINED INDIVIDUALS. BUT FOR THE AIR FORCE, ITS PRIORITY WAS TO ENSURE ALL EMPLOYEES WERE FULLY QUALIFIED.

(SOUNDBITE )

**IN:** "I've always felt good about dropping my daughter off at the Child Development center here. The staff is well trained to handle any type of emergency, and I'm sure that my daughter is receiving the proper care. I don't have to worry about her while I'm at work." **FONT:** SSgt Paul Kuffel (Parent), McChord AFB, Washington (TC: 02:05:07, RT: 11:00)

THE REPORT NOTES THE AIR FORCE CLOSELY MONITORS TRAINING FOR CHILD CARE WORKERS AND IN MOST CASES PROVIDES MUCH MORE THAN JUST MINIMUM REQUIREMENTS.

(SOUNDBITE)

**IN:** "Since child care workers are the key to quality the study begins to make you understand why quality of care at Air Force child care centers remains high. If day care centers continue to emphasize worker training, the level of the child care rises in proportion, and that's a good sign." **FONT:** Cheryl Blankenship, President Federal Childcare Action Campaign (TC: 08:30:08 RT: 19:05)

A SPOKESPERSON FOR THE UNDERSECRETARY OF THE AIR FORCE FAMILY AFFAIRS SAID OFFICIALS ARE STILL EVALUATING THE REPORT, BUT CITED THIS AS ANOTHER GOOD EXAMPLE OF HOW ITS SYSTEM IS IN SUCH A GOOD STATE

REPORTING FOR NEWSCENTER NINE, THIS IS KEVIN OHLSON.

**ANCHOR:** A SPOKESMAN FOR THE UNDERSECRETARY OF AIR FORCE AFFAIRS SAID OFFICIALS ARE PLEASED BUT NOT SURPRISED AT THE REPORT'S FINDINGS.

## **BAD CHILD CARE STORY**

AIR FORCE CHILD CARE CENTERS ARE SOME OF THE WORST IN THE NATION IN TERMS OF STAFF TURNOVER AND LACK OF TRAINING. A REPORT BY THE NATIONAL CENTER FOR THE CHILD CARE WORKFORCE SAYS STAFF TURNOVER IS LARGELY DUE TO EMPLOYEE DISSATISFACTION WITH OUTDATED TRAINING PROGRAMS. MANY OF THE VACANT SLOTS AT AIR FORCE CENTERS ARE BEING FILLED BY WELFARE RECIPIENTS AS STATES PUSH TO EMPTY THE WELFARE ROLLS.

(SOUNDBITE)

IN: "I don't have anything against people on welfare, but I'm not sure they're getting enough training. Our babysitter probably has as much experience or more experience than most of the employees at the daycare center. I'm not confident that my daughter is receiving the proper care, and that bothers me." FONT: SSgt Paul Kuffel (Parent), McChord AFB, Washington (TC: 05:06:12, RT: 12:10)

(take video)

THE REPORT FOCUSES ON QUESTIONS ABOUT THE QUALIFICATIONS OF THE AIR FORCE'S CHILD CARE WORKERS. AIR FORCE REGULATIONS ONLY REQUIRE A FOUR-HOUR TRAINING COURSE. THE REPORT FOUND ONLY ONE THIRD OF WORKERS RECEIVED THE MINIMUM TRAINING REQUIRED.

(SOUNDBITE)

IN: "Since childcare workers are the key to quality, this study begins to make you understand why quality of care at Air Force child care centers is apparently so low. If day care centers don't train workers adequately, children simply won't get adequate child care, and that's not good."

FONT: Sheryl Blankenship, President Federal Childcare Action Campaign (TC: 07:59:07, RT: 21:08)

A SPOKESPERSON FOR THE UNDERSECRETARY OF THE AIR FORCE FAMILY AFFAIRS SAID OFFICIALS ARE STILL EVALUATING THE REPORT.

## **GOOD FOOD FACILITY STORY**

**ANCHOR:** OUR TOP STORY THIS EVENING EXAMINES HOW THE AIR FORCE ENSURES THE FOOD THEY SERVE TO OVER 50-THOUSAND AIRMEN EVERY DAY IS SAFE. KEVIN OHLSON REPORTS THE AIR FORCE IS DOING A GOOD JOB ENSUREING TROOPS WORRY-FREE DINING.

**OHLSON:** FOR AIR FORCE MEMBERS AROUND THE WORLD, SERVING TO PROTECT THE NATION REQUIRES ANOTHER FORCE WITHIN ITSELF. ITS AN EFFORT TO KEEP THE TROOPS FED. WITH RECENT NATIONWIDE CONCERNS ABOUT FOOD SAFETY DUE TO TAINTED BEEF AND IMPORTED PRODUCE SCARES . . . THE CONCERN NATURALLY FLOWED OVER TO THE MILITARY. BUT THE RESULTS TURNED UP SOME RATHER UNIQUE FINDINGS. ACCORDING TO THE GENERAL ACCOUNTING OFFICE, IT TURNS OUT THE AIR FORCE HAS RECEIVED THE HONOR OF HAVING THE BEST QUALITY FOOD CONTROL PROCEDURES NATIONWIDE.

(SOUNDBITE)

IN: "We inspect all our food according to food handling regulations, that of course are similar to the FDA where of course we don't inspect every piece, but we inspect at random and we look for, you know, very important things." FONT: Col. Karla Duckworth, Chief/Air Force dining Services (TC: 00:36:09, RT 12:05)

**OHLSON:** THE G-A-O STUDY FOUND AIR FORCE FOOD INSPECTORS CARRIED OUT 100-PERCENT OF THE REQUIRED INSPECTIONS, A RECORD WHICH FAR EXCEEDS THE STANDARDS OF THEIR CIVILIAN COUNTERPARTS. BUT IT DOESN'T STOP HERE. AIR FORCE FOOD WORKERS ARE ALSO REQUIRED TO ATTEND A 6-WEEK COURSE BEFORE BEING ALLOWED TO PREPARE AND SERVE FOOD. THE BOTTOM LINE IS SERVICE MEMBERS ARE GIVEN A QUALITY PRODUCT THAT'S SAFE TO EAT AT THE SAME TIME. AND AIR FORCE SPOKESMAN ALSO SAID THE WEL-BEING OF ITS TROOPS HAS ALWAYS BEEN A TOP PRIORITY, AND THIS RECENT G-A-O REPORT IS JUST ANOTHER GOOD EXAMPLE OF HOW IT'E DOING THIS. REPORTING FOR NEWSCENTER NINE, THIS IS KEVIN OHLSON.



## **BAD FOOD FACILITY STORY**

**ANCHOR:** OUR TOP STORY THIS EVENING DEALS WITH AIR FORCE DINING FACILITIES. RECENT REPORTS COMING IN FROM ALL OVER THE UNITED STATES DEALING WITH TAINTED FOOD NOW HAVE MILITARY OFFICIALS LOOKING INTO QUALITY CONTROL PROCEDURES AT THEIR FACILITIES ... ESPECIALLY WHEN 30-CASES OF FOOD POISONING THIS YEAR HAVE BEEN REPORTED AT AIR FORCE BASES NATIONWIDE.

(Take video)

MORE THAN 50-THOUSAND AIRMEN DEPEND ON AIR FORCE DINING FACILITIES TO FEED THEM EVERY DAY. THIS DOESN'T MEAN THE FOOD BEING SERVED IS ALWAYS SAFE, ACCORDING TO A REPORT RELEASED BY THE GENERAL ACCOUNTING OFFICE. THE G-A-O CITES INADEQUATE QUALITY CONTROL OF IMPORTED FOODS AND IMPROPER FOOD HANDLING AS THE REASON FOR FAILING MARKS IN FOOD SAFETY.

### **SOUNDBITE**

**IN:** "Well obviously we try to make tasty food for our people, but first concern is safety as always, so we do inspect it and we take it very seriously, and we try to adhere to the highest standards." **FONT:** Col Karla Duckworth, Chief/Air Force Dining Services (TC: 01:14:08, RT: 10:00)

THE STUDY FOUND FOOD SERVED AT AIR FORCE DINING FACILITIES IS RARELY INSPECTED BY FULL-TIME INSPECTORS. LABORATORY ANALYSIS FOR DISEASE-CAUSING ORGANISMS OR OTHER PROBLEMS OCCUR ONLY 65-PERCENT OF THE TIME THEY'RE PLANNED.

**ANCHOR:** AN AIR FORCE SPOKESMAN SAID THE AIR FORCE HAS ALWAYS MADE THE WELL-BEING OF ITS PERSONNEL A PRIORITY, AND THE SERVICE IS STILL EVALUATING THE REPORT.

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